QUARTERLY REPORT

OF THE

Kansas State Board of Agriculture,

FOR THE

QUARTER ENDING DECEMBER 31, 1879.

ALFRED GRAY, SECRETARY.
TOPEKA, KANSAS.

TOPEKA, KANSAS:
GEO. W. MARTIN, KANSAS PUBLISHING HOUSE.
1880.

CHANGE FROM MONTHLY TO QUARTERLY.

The Legislature of 1879 enacted, "That the Monthly Reports required to be made to and by the State Board of Agriculture, by virtue of existing provisions of law, shall hereafter be made quarterly instead of monthly, except when the public interests require special reports."

EXPLANATORY.

OFFICE OF KANSAS STATE BOARD OF AGRICULTURE,
TOPEKA, March 1, 1880.

Hon. Alfred Gray, Secretary of the Kansas State Board of Agriculture, died January 23d, 1880. On Monday, January 26th, at an informal meeting of the members of the Board present, the following resolutions were adopted:

Whereas, By the death of Hon. Alfred Gray, Secretary of the State Board of Agriculture, it becomes necessary for some temporary directions to be given for the forwarding of the work of the Department: therefore, be it

Resolved, That Miss Emma R. Bristol, Chief Clerk of the Department, be directed to continue the business of said Board, receive and answer all communications, proceed to complete and place in the hands of the printer the Fourth Quarterly Report for 1879, and do all other business as Chief Clerk of said Board that may legally come before it, as the late Secretary contemplated prior to his death.

Resolved further, That Miss Emma R. Bristol, Chief Clerk of said Board, correspond with the President of the State Board, and inform him that it is the wish of the undersigned members present that he call a meeting of the Board on Thursday, February 5, 1880, at the State Capitol, for the purpose of electing a Secretary of said Board, to fill the vacancy caused by the death of Hon. Alfred Gray, late Secretary, and to transact all other business that may come before the Board.

(Signed) H. C. ST. CLAIR, *Vice President.*

WM. SIMS.	W. P. POPENOE.
JOSHUA WHEELER.	GEO. Y. JOHNSON.
JAMES SMITH.	JOHN P. ST. JOHN.

PROCEEDINGS OF CALLED MEETING.

OFFICE OF STATE BOARD OF AGRICULTURE,
TOPEKA, KAS., Feb. 5, 1880.
3 o'clock P. M.

Board met pursuant to call; President Jenkins in the chair. Major Wm. Sims was requested to act as Secretary *pro tem.*

The following members were present: Messrs. W. P. Popenoe, H. C. St. Clair, Wm. Sims, J. W. Johnson, Joshua Wheeler, S. J. Carter, I. O. Savage, O. D. Harmon, J. M. Harvey, Geo. Y. Johnson, M. Mohler, James Smith, Secretary of State, and J. P. St. John, Governor. Quorum present.

Minutes of the special informal meeting, held in the office of the State Board, Monday, January 26th, 1880, were read and approved.

On motion, the President appointed a committee of three, consisting of Messrs. W. P. Popenoe, Wm. Sims and Geo. Y. Johnson, to prepare resolutions of respect for the Hon. Alfred Gray, deceased, late Secretary of the Board.

The committee reported the following resolutions, which were unanimously adopted:

Whereas, It has seemed meet to Him who holdeth the destiny of all mankind in his hand to remove from earthly labor and from our midst our faithful, untiring and efficient Secretary, the Hon. Alfred Gray, freeing him from disease and pain, and transferring him to higher and nobler fields of usefulness; and

Whereas, We have but to point to the work he has performed for the interests of our State as his most enduring monument, and we realize that no words of ours can add anything to his fame; yet, as his co-laborers, associates and friends, it is fitting that we bear witness to his many good qualities of mind and heart, among which we would speak of his great energy, industry, exactness, courage, and unflinching integrity, his singleness of heart, and never-varying purpose to advance the interests of Kansas: therefore,

Resolved, That in the death of Alfred Gray, we realize that each of us has lost a warm personal friend, the State one of its greatest benefactors, the community a useful citizen, and agriculture an able and earnest advocate.

Resolved, That a page of the next biennial report be set apart, heavily draped, and dedicated to his memory, bearing date of birth and death.

On motion, the Board proceeded to the election of a Secretary, to fill the vacancy created by the death of Hon. Alfred Gray. All communications and petitions pertaining to the subject were read, and ordered to be placed on file in the Secretary's office. S. J. Carter and Joshua Wheeler were appointed tellers, and the Board proceeded to ballot. Fourteen votes were cast, J. K. Hudson receiving nine, five scattering. Mr. Hudson, having received a legal majority, was duly declared elected.

On motion of Geo. Y. Johnson, it was directed that a full-page steel plate engraving of Alfred Gray be inserted in the Second Biennial Report, of 1879–80, together with a complete biographical sketch of his life. A general discussion followed, on topics connected with the work of the Board.

Mr. Hudson appeared, and, after being qualified, assumed the duties of Secretary.

The Board then adjourned, to meet at 9 o'clock A. M., February 6th.

FEBRUARY 6th, 9 A. M.

Board met pursuant to adjournment. Quorum present. Minutes of previous meeting read and approved.

On motion of Mr. Wheeler, it was resolved that the Secretary be instructed to procure a life-size portrait of Hon. Alfred Gray, late Secretary, to be placed in the rooms of the State Board of Agriculture.

On motion of Mr. Popenoe, the name of Prof. Patrick was added as one of the two chemists to the State Board of Agriculture.

Hon. D. B. Long, Fish Commissioner of the State, being present, was called upon, and gave an interesting account of the progress he is making in stocking Kansas streams with fish.

The Board adjourned, to meet subject to the call of the President and Secretary.

Owing to the continued ill-health of Mr. Gray for months, the publication of the report for the quarter ending December 31st, 1879, was not completed at the time of his death. It was the intention of Mr. Gray to make the Fourth Quarterly a resumé of the year, more complete and valuable than any preceding Quarterly. Although confined to his house for three months preceding his death, he gave to his work every thought and energy, dictating and sketching plans for the present volume every day—the last instructions being given the evening before the day of his death. The present volume is his last, uncompleted work. Although its scope and character and its plan and arrangement were decided upon by him, and a large part of the clerical work completed before his death, it was not left for his master mind, that has done so much for Kansas, to finish the work.

To Miss Bristol, Chief Clerk of the Department, much credit is due for the intelligent and industrious manner in which she has carried forward the work, under Mr. Gray's direction. In accordance with the resolutions of the Board heretofore published, Miss Bristol assumed the responsibility of the office in the interim between Mr. Gray's death and the election of his successor, and most satisfactorily performed the duties devolving upon her in the discharge of the business of the office.

In conclusion, the Secretary expresses the hope that the county and township officers and correspondents who have contributed valuable aid in making the reports of this Department, will continue to coöperate, and assist in maintaining the high rank heretofore given the reports of the State Board of Agriculture throughout the State and country.

J. K. HUDSON, *Secretary.*

REPORT OF THE KANSAS BOARD OF AGRICULTURE,

FOR THE QUARTER ENDING DECEMBER 31, 1879.

AVERAGE CONDITION OF CROPS AND FARM ANIMALS, DECEMBER 20, 1879.

Counties.	*Winter Wheat.*	*Winter Rye.*	*Cattle.*	*Work Animals.*	*Horses and Mules.*	*Sheep.*	*Swine.*
Allen	117	112	101	106	101	100	106
Anderson	108	115	100	102	105	107	107
Atchison	101	100	101	100	100	103	105
Barbour	100	100	100	100	100	100	100
Barton	110	105	102	102	105	100	107
Bourbon	112	110	103	103	102	93	105
Brown	120	.....	110	105	105	100	100
Butler	103	103	108	105	105	110	108
Chautauqua	120	120	107	100	102	102	107
Chase	94	80	100	97	100	100	100
Cherokee	105	.....	100	105	105	95	100
Clay	100	.....	75	90	100	100	100
Cloud	105	100	100	100	100	103	108
Coffey	108	100	103	97	97	98	97
Cowley	100	95	100	97	98	112	100
Crawford	103	110	103	103	103	100	103
Davis	125	100	100	100	100	100	100
Dickinson	117	111	104	101	101	108	100
Doniphan	105	105	102	102	100	100	110
Douglas	115	115	100	100	100	105	100
Edwards	83	.....	100	95	95	100	.....
Elk	102	100	102	103	103	100	106
Ellis	83	75	112	100	102	100	100
Ellsworth	95	.....	100	100	100	100	100
Ford	100	125	105	90	90	105	95
Franklin	100	.....	100	100	100	100	110
Greenwood	108	110	105	100	100	102	102
Harper	115	100	90	85	85	80	100
Harvey	120	110	103	100	100	103	103
Jackson	105	105	100	100	100	100	100
Jefferson	100	100	100	101	99	100	99
Jewell	100	100	100	100	100	100	100
Johnson	100	.....	100	100	100	100	95
Kingman	115	110	100	100	110	105	105
Labette	115	110	106	101	100	102	110
Leavenworth	133	125	97	98	98	100	112
Lincoln	105	100	95	100	100	95	100
Linn	103	105	97	100	100	100	100
Lyon	117	102	105	105	105	108	112
Marion	95	95	95	100	95	93	98
Marshall	107	100	98	96	97	100	100
McPherson	107	110	100	100	100	100	103
Miami	110	110	100	100	102	100	75
Mitchell	90	93	93	92	92	97	97
Montgomery	100	100	105	105	105	105	110
Morris	123	120	105	102	102	103	100
Nemaha	110	112	102	102	102	.....	107
Neosho	102	.....	104	101	101	102	102
Norton	100	100	100	90	90	100	100
Osage	106	104	100	100	100	100	101
Osborne	98	100	99	97	100	103	95
Ottawa	100	100	100	100	100	100	100
Pawnee	100	100	95	92	95	100	100
Phillips	90	92	103	103	105	100	106
Pottawatomie	104	100	100	100	100	100	100
Pratt	100	100	100	100	100	100	100
Reno	118	111	100	100	100	102	102
Republic	115	105	100	100	100	100	105
Rice	.....	.....	.....	.....	.....	.....	.....
Riley	112	112	100	100	100	102	105
Rooks	98	100	100	110	110	100	100
Rush	.....	.....	.....	.....	.....	.....	.....
Russell	83	88	101	98	99	99	108

AVERAGE CONDITION OF CROPS AND FARM ANIMALS—CONCLUDED.

Counties.	Winter Wheat.	Winter Rye.	Cattle.	Work Animals.	Horses and Mules.	Sheep.	Swine.
Saline	110	100	100	100	100	100	100
Sedgwick	147	.....	105	100	109	100	115
Shawnee	110	80	100	100	100	.....	90
Smith	103	105	102	100	105	100	100
Sumner	122	113	110	105	110	100	110
Wabaunsee	104	102	100	100	100	102	103
Washington	100	100	100	103	100	95	102
Wilson	103	100	100	107	102	100	103
Woodson	102	.....	107	100	100	100	100
Wyandotte	100	105	100	98	100	100	98
Total average	106+	104—	101—	100—	100+	101—	102+

FARM ANIMALS, CROPS, GENERAL PROSPECTS, ETC.

FARM ANIMALS.

The following is the condition of farm animals for the four quarters of 1879, ending respectively, March 31, June 30, September 30, and December 31:

	Cattle.	Work Animals.	Horses and Mules.	Sheep.	Swine.
March 31	99	100	100	100	102
June 30	101	99	100	101	101
September 30	100	99	99	101	101
December 31	101	100	100	101	102
Average for year	100+	100—	100—	101—	101+

The condition of stock throughout the State has been unusually fine. Heavy, late rains in the fall filled all streams and ponds with a pure and abundant supply of water for the winter months, and the dry, mild season since has been all that could be desired. With no long, cold, drenching storms to chill and dishearten, plenty of food and plenty of drink have sustained stock in the very best condition.

One of our southwestern correspondents says: "Cattle have subsisted entirely on the range, so far, and are in excellent condition."

CROPS.

Late rains materially benefited the fall grain. Correspondents universally report that wheat is well rooted, with ground wet and well packed about the roots—conditions that almost insure for the coming harvest a bountiful crop. The average condition for the State, as compared with last year, is—

Winter wheat—December, 1878	92	Winter rye—December, 1878	95
December, 1879	106	December, 1879	104
Per cent. higher than last year	14	Per cent. higher than last year	9

ACREAGE OF FALL WHEAT IN 1879.

A compilation from the estimates of our correspondents, on December 20, shows the total acreage of winter wheat sown this fall to be 1,866,326, or an increase over that of 1878 of 345,667 acres.

It must be remembered that the figures for 1879 are simply *estimates*, made from general observations, which the official returns of assessors next spring may very materially change. The figures for 1878 are from official returns of assessors on March 1, 1879.

FRUIT.

Fruit prospects are excellent; trees well set with buds. Fears are entertained by some that the recent and continuous warm weather may develop the buds so far that injury may be done them in case of subsequent severe cold.

GENERAL PROSPERITY.

Never has there been a more unanimous expression of satisfaction and good feeling among our farmers than at the close of 1879. Dealers in lumber, hardware, and dry goods, have done a great amount of business. This is directly indicative of the fact that the farmers are in circumstances to provide for themselves and their stock more comfortable houses and shelter, and better clothing for themselves and families. Our correspondents remark a steady improvement in quality of stock, more care in the preparation of the soil for seeding, and more thorough cultivation of growing crops.

DISEASES AMONG FARM ANIMALS.

Reports of condition of farm animals have been received from seventy-five counties. The uniform statement of correspondents is, that no prevailing disease or epidemic exists among domestic animals. Stock has never been better prepared for winter than this season.

Forty-one counties report perfect health. Only four counties mention hog-cholera. In one section of Allen county there were a few cases; some near Enterprise, in Dickinson county—the disease being checked by mixing sulphur with the feed; a very few cases near Gardner, in Johnson county; some in Miami county.

The disease called "black-leg" is mentioned as occurring in isolated districts in eleven counties, viz.: Anderson, Atchison, Greenwood, Harvey, Jefferson, Nemaha, Pottawatomie, Reno, Republic, Riley and Wabaunsee. In Anderson it is said to have been cured by large doses of turpentine. One correspondent states that calves pastured on blue-grass do not suffer from it. In Harvey it is reported that sulphuric acid, put in water the calves drank, proved a remedy. In Nemaha sulphur and saltpetre is used as a preventive; while in Pottawatomie, same remedy, with copperas added, has proved efficacious. In Riley a remedy is said to have been found by splitting the skin just above the fork of the hoof in each foot; on pressing this apart, a small blue vein will be seen. This vein is lifted with a bent wire like a shoe-buttoner, and severed.

In Bourbon and Wilson counties, mention is made of scab in sheep; but dipping in a decoction of tobacco is so certain a cure that this can hardly be called a disease.

The Texas or Spanish fever is mentioned as affecting a few cattle in Chautauqua; also, in Palmyra township, in Douglas county, where a herd of Texas cattle was fed for awhile. After these cattle left, however, there were no more cases.

In Clay county some alarm was caused at Wakefield by a report that two mules had died of glanders. In Sumner, also, one correspondent mentions some few cases of this disease.

WINTER WHEAT.

Comparative Table, showing acreage of Winter Wheat sown in fall of 1878, as returned by assessors, and acreage sown in fall of 1879, as *estimated* by our monthly correspondents.

Counties.	*Acreage in fall of 1878.*	*Acreage in fall of 1879.*	*Counties.*	*Acreage in fall of 1878.*	*Acreage in fall of 1879.*
Allen	5,256	7,199	Lyon	9,297	11,156
Anderson	5,035	8,811	Marion	38,472	45,397
Atchison	20,488	24,586	Marshall	13,354	18,429
Barbour	1,215	1,494	McPherson	82,234	96,214
Barton	60,478	83,430	Miami	13,677	19,421
Bourbon	10,942	16,413	Mitchell	21,206	22,266
Brown	19,730	11,703	Montgomery	25,921	27,217
Butler	46,561	52,614	Morris	11,127	12,796
Chautauqua	7,797	9,512	Nemaha	2,757	2,812
Chase	7,840	8,075	Neosho	11,827	18,332
Cherokee	13,632	14,995	Norton	4,613	13,839
Clay	33,142	36,456	Osage	12,133	13,346
Cloud	17,429	21,786	Osborne	24,617	32,741
Coffey	5,683	7,502	Ottawa	33,552	41,940
Cowley	53,592	64,846	Pawnee	32,094	33,057
Crawford	10,937	15,531	Phillips	12,328	16,273
Davis	12,744	15,930	Pottawatomie	9,481	11,377
Dickinson	68,042	80,290	Pratt	1,984	4,464
Doniphan	40,545	46,627	Reno	44,151	55,189
Douglas	21,024	23,126	Republic	10,257	14,873
Edwards	9,585	13,227	Rice	29,051	*29,051
Elk	6,863	7,483	Riley	6,463	6,851
Ellis	12,995	17,933	Rooks	4,786	11,965
Ellsworth	20,671	25,839	Rush	19,163	19,163
Ford	4,379	3,591	Russell	20,779	22,857
Franklin	7,041	10,562	Saline	65,681	77,504
Greenwood	8,347	9,599	Sedgwick	69,716	79,476
Harper	1,886	9,430	Shawnee	13,311	16,639
Harvey	36,148	45,185	Smith	14,844	22,266
Jackson	12,781	14,059	Sumner	59,642	79,324
Jefferson	28,859	34,054	Wabaunsee	11,607	13,607
Jewell	17,333	21,666	Washington	12,633	15,160
Johnson	22,472	29,663	Wilson	16,604	21,585
Kingman	3,540	18,585	Woodson	3,035	3,521
Labette	26,389	33,514	Wyandotte	12,995	15,205
Leavenworth	28,015	34,458			
Lincoln	25,179	28,956	Total	1,520,659	1,866,326
Linn	10,672	12,273			

*Acreage of 1878; no report for 1879.

CROP STATISTICS.

SUMMARY BY COUNTIES, showing number of acres, product, and value of crop, for 1879.

COUNTIES.	WINTER WHEAT.			RYE.		
	Acres.	*Bushels.*	*Value.*	*Acres.*	*Bushels.*	*Value.*
Allen	5,256	78,840	$74,898 00	241	2,892	$1,156 80
Anderson	5,035	90,630	86,098 50	208	3,120	1,248 00
Atchison	20,488	348,296	355,261 92	362	6,516	2,606 40
Barbour	1,215	8,505	7,654 50	57	570	228 00
Barton	60,478	302,390	302,390 00	656	5,248	2,099 20
Bourbon	10,942	142,246	135,133 70	106	1,378	551 20
Brown	19,730	355,140	337,383 00	2,268	40,824	16,329 60
Butler	46,561	465,610	395,768 50	219	2,628	1,051 20
Chautauqua	7,797	109,158	82,960 08	53	689	275 60
Chase	7,840	70,560	63,504 00	284	3,408	1,363 20
Cherokee	13,632	190,848	181,305 60	75	1,050	420 00
Clay	33,142	397,704	357,933 60	1,558	23,370	9,348 00
Cloud	17,429	209,148	188,233 20	1,563	23,445	9,378 00
Coffey	5,683	102,294	97,179 30	457	7,769	3,107 60
Cowley	53,592	803,880	659,181 60	41	615	246 00
Crawford	10,937	174,992	166,242 40	100	1,600	640 00
Davis	12,744	140,184	133,174 80	275	3,300	1,320 00
Dickinson	68,042	544,336	500,789 12	646	7,752	3,100 80
Doniphan	40,545	729,810	729,810 00	1,347	24,246	9,698 40
Douglas	21,024	357,408	357,408 00	278	5,004	2,001 60
Edwards	9,585	19,170	19,170 00	21	21	8 40
Elk	6,863	102,945	82,356 00	31	465	186 00
Ellis	12,995	90,965	72,772 00	207	2,070	828 00
Ellsworth	20,671	165,368	140,562 80	449	6,735	2,694 00
Ford	4,379	2,190	2,190 00	54	54	21 60
Franklin	7,041	119,697	119,697 00	138	2,208	883 20
Greenwood	8,347	125,205	106,424 25	143	2,145	858 00
Harper	1,886	18,860	16,974 00	21	210	84 00
Harvey	36,148	361,480	336,176 40	173	2,249	899 60
Jackson	12,781	204,496	204,496 00	756	15,120	6,048 00
Jefferson	28,859	490,603	490,603 00	298	5,960	2,384 00
Jewell	17,333	190,663	162,063 55	1,480	20,720	8,288 00
Johnson	22,472	382,024	385,844 24	464	8,352	3,340 80
Kingman	3,540	21,240	19,116 00	19	114	45 60
Labette	26,389	395,835	376,043 25	289	4,335	1,734 00
Leavenworth	28,015	476,255	485,780 10	206	3,914	1,565 60
Lincoln	25,179	276,969	235,423 65	427	6,405	2,562 00
Linn	10,672	138,736	131,799 20	185	2,775	1,110 00
Lyon	9,297	111,564	105,985 80	1,053	13,689	5,475 60
Marion	38,472	461,664	415,497 60	521	5,210	2,084 00
Marshall	13,354	186,956	173,869 08	2,111	35,887	14,354 80
McPherson	82,234	986,808	858,522 96	114	1,368	547 20
Miami	13,677	205,155	201,051 90	393	6,288	2,515 20
Mitchell	21,206	233,266	209,939 40	1,376	19,264	7,705 60
Montgomery	25,921	388,815	369,374 25	41	574	229 60
Morris	11,127	122,397	104,037 45	280	3,360	1,344 00
Nemaha	2,757	38,598	36,282 12	731	13,158	5,263 20
Neosho	11,827	177,405	168,534 75	223	3,568	1,427 20
Norton	4,613	55,356	52,588 20	1,457	20,398	8,159 20
Osage	12,133	218,394	196,554 60	208	3,744	1,497 60
Osborne	24,617	295,404	251,093 40	871	13,936	5,574 40
Ottawa	33,552	369,072	339,546 24	467	5,137	2,054 80
Pawnee	32,094	96,282	96,282 00	517	5,170	2,068 00
Phillips	12,328	160,264	120,198 00	2,274	31,836	12,734 40
Pottawatomie	9,481	151,696	142,594 24	1,162	18,592	7,436 80
Pratt	1,984	5,952	5,952 00	.....	.....	.....
Reno	44,151	154,529	143,711 97	257	1,285	514 00
Republic	10,257	123,084	110,775 60	2,872	45,952	18,380 80
Rice	29,051	174,306	162,104 58	140	1,400	560 00
Riley	6,463	96,945	93,067 20	1,426	22,816	9,126 40
Rooks	4,786	52,646	42,116 80	525	7,875	3,150 00
Rush	19,163	57,489	45,991 20	106	318	127 20
Russell	20,779	207,790	174,543 60	322	3,542	1,416 80
Saline	65,681	656,810	591,129 00	164	2,624	1,049 60
Sedgwick	69,716	697,160	606,529 20	203	2,436	974 40
Shawnee	13,311	226,287	226,287 00	1,026	16,416	6,566 40
Smith	14,844	192,972	154,377 60	775	11,625	4,650 00
Sumner	59,642	596,420	489,064 40	185	2,405	962 00
Wabaunsee	11,607	197,319	179,560 29	340	5,780	2,312 00
Washington	12,633	164,229	147,806 10	4,541	72,656	29,062 40
Wilson	16,604	249,060	229,135 20	134	2,144	857 60
Woodson	3,035	48,560	44,675 20	200	2,600	1,040 00
Wyandotte	12,995	194,925	198,823 50	505	8,080	3,232 00
Total	1,520,659	17,560,259	$16,087,403 69	43,675	660,409	$264,163 60

SUMMARY BY COUNTIES—CONTINUED.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	SPRING WHEAT.			CORN.		
	Acres.	*Bushels.*	*Value.*	*Acres.*	*Bushels.*	*Value.*
Allen	23	184	$156 40	39,275	1,374,625	$343,656 25
Anderson	100	900	765 00	29,138	1,165,520	291,380 00
Atchison	245	1,960	1,803 20	51,329	2,053,160	554,353 20
Barbour	84	252	201 60	1,634	32,680	17,974 00
Barton	10,456	41,824	37,641 60	39,901	598,515	239,406 00
Bourbon	18	144	122 40	63,131	2,525,240	631,310 00
Brown	8,456	101,472	86,251 20	82,764	3,476,088	903,782 88
Butler	600	3,600	2,700 00	69,019	2,415,665	579,759 60
Chautauqua	5	35	23 10	36,024	1,260,842	289,993 66
Chase	1,486	5,944	4,755 20	15,671	470,130	108,129 90
Cherokee	58	464	394 40	69,359	2,427,565	606,891 25
Clay	13,660	81,960	65,568 00	50,335	1,862,395	428,350 85
Cloud	25,421	152,526	122,020 80	54,394	1,958,184	391,636 80
Coffey	33	264	224 40	37,659	1,355,724	338,931 00
Cowley	2	12	8 64	69,009	2,760,360	607,279 20
Crawford	50	500	425 00	66,847	2,673,880	641,731 20
Davis	2,636	13,180	11,203 00	14,991	449,730	112,432 50
Dickinson	21,524	64,572	52,949 04	46,353	1,390,590	333,741 60
Doniphan	4,470	62,580	56,322 00	52,171	2,347,695	633,877 65
Douglas	37	370	333 00	55,420	1,718,020	429,505 00
Edwards	2,110	.....	.....	3,954	11,862	5,337 90
Elk	.....	.....	.....	32,724	1,145,340	263,428 20
Ellis	236	1,180	826 00	6,951	201,579	60,473 70
Ellsworth	5,652	28,260	21,195 00	21,550	862,000	215,500 00
Ford	337	.....	.....	999	.....	.....
Franklin	40	400	360 00	56,844	2,046,384	511,596 00
Greenwood	40	360	270 00	35,732	1,429,280	328,734 40
Harper	34	102	81 60	5,649	152,523	53,383 05
Harvey	1,518	10,626	8,819 58	41,167	1,440,845	360,211 25
Jackson	395	3,555	3,199 50	48,111	1,924,440	481,110 00
Jefferson	107	1,070	963 00	64,326	2,315,736	578,934 00
Jewell	35,676	285,408	214,056 00	62,753	2,510,120	502,024 00
Johnson	135	1,350	1,228 50	64,696	2,587,840	672,838 40
Kingman	1,322	3,305	2,644 00	10,918	382,130	106,996 40
Labette	42	336	285 60	77,549	2,946,862	736,715 50
Leavenworth	8	64	58 88	42,221	1,688,840	506,652 00
Lincoln	6,314	37,884	28,413 00	19,456	583,680	128,409 60
Linn	60	600	510 00	69,620	2,645,560	661,390 00
Lyon	912	8,208	6,976 80	47,009	2,115,405	507,697 20
Marion	2,742	21,936	17,548 80	34,815	1,218,525	304,631 25
Marshall	28,139	253,251	210,198 33	51,508	2,060,320	494,476 80
McPherson	4,986	44,874	34,552 98	54,646	2,185,840	524,601 60
Miami	10	100	88 00	89,408	3,576,320	894,080 00
Mitchell	19,585	137,095	109,676 00	44,223	1,326,690	291,871 80
Montgomery	8	64	54 40	70,818	2,478,630	594,871 20
Morris	6,718	53,744	40,308 00	22,226	666,780	160,027 20
Nemaha	4,864	43,776	36,771 84	50,710	2,028,400	486,816 00
Neosho	18	144	122 40	58,541	2,048,935	512,233 75
Norton	2,516	25,160	21,386 00	7,418	296,720	118,688 00
Osage	187	2,244	1,795 20	51,344	1,899,728	474,932 00
Osborne	12,749	114,741	86,055 75	26,101	730,828	182,707 00
Ottawa	11,288	67,728	55,536 96	28,586	914,752	192,097 92
Pawnee	2,870	11,480	10,332 00	14,084	70,420	31,689 00
Phillips	14,404	129,636	84,263 40	22,128	885,120	221,280 00
Pottawatomie	7,527	67,743	56,904 12	51,101	1,788,535	429,248 40
Pratt	332	1,328	1,195 20	4,924	24,620	9,848 00
Reno	20,282	101,410	84,170 30	47,272	1,181,800	295,450 00
Republic	36,316	290,528	232,422 40	51,124	2,044,960	408,992 00
Rice	8,873	70,984	58,916 72	31,214	780,350	195,087 50
Riley	9,973	79,784	68,614 24	28,121	1,265,445	303,706 80
Rooks	2,425	24,250	16,975 00	8,348	292,180	87,654 00
Rush	2,519	7,557	5,289 90	11,274	112,740	45,096 00
Russell	771	6,168	4,564 32	14,150	466,950	130,746 00
Saline	10,385	62,310	49,848 00	37,739	1,320,865	303,798 95
Sedgwick	1,025	7,175	5,524 75	79,225	2,693,650	619,539 50
Shawnee	263	1,578	1,420 20	60,230	2,288,740	572,185 00
Smith	32,345	258,760	181,132 00	47,437	1,660,295	381,867 85
Sumner	58	406	292 32	74,616	2,611,560	600,658 80
Wabaunsee	2,130	17,040	13,802 40	25,249	883,715	212,091 60
Washington	21,521	172,168	137,734 40	50,408	2,016,320	443,590 40
Wilson	.....	.....	.....	52,734	2,109,360	485,152 80
Woodson	4	32	26 24	18,906	756,240	173,935 20
Wyandotte	4	32	29 44	17,789	711,560	213,468 00
Total	412,139	2,990,677	$2,361,307 45	2,995,070	108,704,927	$26,562,674 46

SUMMARY BY COUNTIES—Continued.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	BARLEY.			OATS.		
	Acres.	*Bushels.*	*Value.*	*Acres.*	*Bushels.*	*Value.*
Allen	51	918	$459 00	7,754	131,818	$32,954 50
Anderson	86	1,548	774 00	6,283	144,509	36,127 25
Atchison	471	10,833	5,416 50	7,257	246,738	74,021 40
Barbour	39	312	156 00	1,548	15,480	7,740 00
Barton	1,321	10,568	5,284 00	13,229	171,977	68,790 80
Bourbon	213	4,260	2,130 00	11,406	228,120	63,873 60
Brown	6,486	142,692	71,346 00	7,911	316,440	79,110 00
Butler	64	1,152	576 00	13,402	294,844	64,865 68
Chautauqua	8	144	72 00	3,161	63,220	15,805 00
Chase	137	2,055	1,027 50	3,525	52,875	11,632 50
Cherokee	183	2,928	1,464 00	17,414	348,280	87,070 00
Clay	559	10,062	5,031 00	6,789	203,670	42,770 70
Cloud	1,000	14,000	7,000 00	5,878	193,974	40,734 54
Coffey	12	216	108 00	7,208	144,160	36,040 00
Cowley	153	3,060	1,530 00	11,499	287,475	66,119 25
Crawford	41	820	410 00	13,585	312,455	78,113 75
Davis	253	2,024	1,012 00	2,497	29,964	6,891 72
Dickinson	1,146	11,460	5,730 00	11,572	173,580	38,187 60
Doniphan	2,768	60,896	30,448 00	7,839	313,560	94,068 00
Douglas	58	1,044	522 00	9,105	291,360	81,580 80
Edwards	1,633	.....	.....	3,049	.....	.....
Elk	52	936	468 00	3,648	76,608	19,152 00
Ellis	114	1,140	570 00	1,325	26,500	9,275 00
Ellsworth	460	5,520	2,760 00	3,866	108,248	28,144 48
Ford	701	.....	.....	1,424	.....	.....
Franklin	91	1,820	910 00	7,352	220,560	55,140 00
Greenwood	30	600	300 00	5,679	113,580	28,395 00
Harper	.....	.....	.....	834	1,668	667 20
Harvey	758	6,064	3,032 00	16,601	298,818	71,716 32
Jackson	184	4,600	2,300 00	6,264	175,392	43,848 00
Jefferson	115	2,875	1,437 50	7,971	239,130	59,782 50
Jewell	1,094	19,692	9,846 00	6,388	223,580	44,716 00
Johnson	113	2,260	1,130 00	11,251	292,526	81,907 28
Kingman	.....	.....	.....	2,148	17,184	6,014 40
Labette	75	1,350	675 00	16,746	385,158	100,141 08
Leavenworth	330	7,260	3,630 00	7,893	252,576	75,772 80
Lincoln	550	8,250	4,125 00	3,088	61,760	15,440 00
Linn	.....	.....	.....	12,199	268,378	67,094 50
Lyon	198	3,564	1,782 00	7,239	180,975	47,053 50
Marion	1,010	12,120	6,060 00	11,723	117,230	28,135 20
Marshall	1,191	23,820	11,910 00	10,534	368,690	81,111 80
McPherson	1,558	20,254	10,127 00	26,357	527,140	131,785 00
Miami	9	162	81 00	10,311	329,952	82,488 00
Mitchell	388	5,820	2,910 00	4,414	88,280	21,187 20
Montgomery	210	4,200	2,100 00	13,346	266,920	66,730 00
Morris	380	5,700	2,850 00	5,904	118,080	28,339 20
Nemaha	569	11,380	5,690 00	8,031	281,085	70,271 25
Neosho	5	75	37 50	9,637	212,014	53,003 50
Norton	650	13,000	6,500 00	448	16,576	6,630 40
Osage	62	1,240	620 00	5,601	168,030	42,007 50
Osborne	235	4,230	2,115 00	2,473	61,825	18,547 50
Ottawa	524	9,432	4,716 00	6,078	139,794	30,754 68
Pawnee	2,426	2,426	1,213 00	7,546	113,190	50,935 50
Phillips	959	15,344	7,672 00	2,236	60,372	18,111 60
Pottawatomie	1,614	32,280	16,140 00	9,887	296,610	68,220 30
Pratt	33	165	82 50	1,302	6,510	2,604 00
Reno	346	2,768	1,384 00	21,554	215,540	60,351 20
Republic	4,937	98,740	49,370 00	6,299	251,960	57,950 80
Rice	1,244	18,660	9,330 00	9,544	190,880	66,808 00
Riley	697	13,940	6,970 00	4,151	145,285	33,415 55
Rooks	107	2,140	1,070 00	289	7,225	2,167 50
Rush	651	1,302	651 00	2,584	12,920	5,814 00
Russell	85	1,275	637 50	2,246	44,920	13,476 00
Saline	1,232	18,480	9,240 00	11,801	177,015	40,713 45
Sedgwick	415	6,225	3,112 50	26,763	588,786	135,420 78
Shawnee	221	3,978	1,989 00	5,798	173,940	48,703 20
Smith	681	10,215	5,107 50	2,669	66,725	17,348 50
Sumner	483	7,728	3,864 00	21,302	489,946	117,587 04
Wabaunsee	314	4,710	2,355 00	3,638	90,950	21,828 00
Washington	953	19,060	9,530 00	9,098	363,920	83,701 60
Wilson	32	640	320 00	8,777	219,425	54,856 25
Woodson	47	940	470 00	5,056	111,232	26,695 68
Wyandotte	36	720	360 00	2,758	96,530	28,959 00
Total	45,851	720,092	$360,046 00	573,982	13,326,637	$3,397,416 33

SUMMARY BY COUNTIES—CONTINUED.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	BUCKWHEAT.			IRISH POTATOES.		
	Acres.	*Bushels.*	*Value.*	*Acres.*	*Bushels.*	*Value.*
Allen	103.75	1,556.25	$1,400 63	631	31,550	$18,930 00
Anderson	36.00	540.00	486 00	414	20,700	12,420 00
Atchison	20.00	300.00	270 00	1,197	83,790	50,274 00
Barbour	.....	.....	.....	245	12,250	13,475 00
Barton	16.00	80.00	72 00	1,125	38,250	34,425 00
Bourbon	108.25	1,623.75	1,461 38	1,000	50,000	32,500 00
Brown	13.25	198.75	178 88	770	50,050	27,527 50
Butler	34.50	517.50	465 75	1,318	75,126	52,588 20
Chautauqua	23.00	345.00	310 50	524	19,388	15,510 40
Chase	31.75	476.25	428 63	326	16,300	13,040 00
Cherokee	120.75	1,811.25	1,630 13	901	36,040	28,832 00
Clay	22.50	337.50	303 75	737	51,590	30,954 00
Cloud	15.50	232.50	209 25	995	64,675	42,038 75
Coffey	150.00	2,250.00	2,025 00	613	30,650	21,455 00
Cowley	33.63	504.45	454 01	1,269	85,023	68,018 40
Crawford	174.75	2,621.25	2,359 13	893	50,901	33,085 65
Davis	19.00	285.00	256 50	388	21,340	13,871 00
Dickinson	24.00	360.00	324 00	1,348	47,180	28,308 00
Doniphan	53.00	795.00	715 50	1,125	75,375	37,687 50
Douglas	28.75	431.25	388 13	1,505	75,250	60,200 00
Edwards	12.75	.....	.....	260	.....	.....
Elk	27.00	405.00	364 50	553	22,673	15,871 10
Ellis	3.00	24.00	21 60	295	2,950	2,212 50
Ellsworth	4.37	43.70	39 33	617	30,850	20,052 50
Ford	.....	.....	.....	92	.....	.....
Franklin	52.00	780.00	702 00	874	49,818	29,890 80
Greenwood	37.00	555.00	499 50	605	39,930	25,954 50
Harper	10.00	100.00	90 00	83	830	913 00
Harvey	33.00	495.00	445 50	822	36,990	24,043 50
Jackson	12.00	180.00	162 00	602	45,150	29,347 50
Jefferson	31.00	465.00	418 50	1,205	78,325	50,911 25
Jewell	66.50	997.50	897 75	1,303	65,150	29,317 50
Johnson	100.00	1,500.00	1,350 00	1,380	89,700	53,820 00
Kingman	1.00	8.00	7 20	161	1,610	1,368 50
Labette	80.75	1,211.25	1,090 13	1,004	45,180	38,403 00
Leavenworth	8.00	120.00	108 00	2,042	102,100	61,260 00
Lincoln	8.00	120.00	108 00	720	28,800	18,720 00
Linn	25.00	375.00	337 50	832	41,600	24,960 00
Lyon	50.00	750.00	675 00	979	48,950	36,712 50
Marion	11.00	165.00	148 50	853	42,650	34,120 00
Marshall	76.25	1,143.75	1,029 38	1,119	100,710	50,355 00
McPherson	8.00	120.00	108 00	1,520	91,200	72,960 00
Miami	38.50	577.50	519 75	1,063	63,780	38,268 00
Mitchell	63.00	945.00	850 50	1,411	63,495	44,446 50
Montgomery	117.50	1,762.50	1,586 25	955	38,200	32,470 00
Morris	9.00	135.00	121 50	663	33,150	21,547 50
Nemaha	56.25	843.75	759 38	753	56,475	28,237 50
Neosho	85.00	1,275.00	1,147 50	928	55,680	38,976 00
Norton	10.00	150.00	135 00	279	13,950	8,370 00
Osage	26.00	390.00	351 00	877	43,850	32,887 50
Osborne	.....	.....	.....	1,058	42,329	29,624 00
Ottawa	19.00	285.00	256 50	799	35,955	21,573 00
Pawnee	14.00	70.00	63 00	600	12,000	13,200 00
Phillips	30.75	461.25	415 13	746	44,760	22,380 00
Pottawatomie	62.25	933.75	840 38	902	27,060	16,236 00
Pratt	1.00	5.00	4 50	114	1,140	1,254 00
Reno	23.00	230.00	207 00	1,386	34,650	24,255 00
Republic	51.00	765.00	688 50	1,055	84,400	37,980 00
Rice	32.50	325.00	292 50	921	27,630	24,867 00
Riley	7.50	112.50	101 25	587	29,350	17,610 00
Rooks	8.00	120.00	108 00	288	24,480	14,688 00
Rush	7.00	35.00	31 50	537	5,370	5,370 00
Russell	.....	.....	.....	397	15,880	11,116 00
Saline	16.00	240.00	216 00	1,056	52,800	31,680 00
Sedgwick	17.00	255.00	229 50	1,525	82,350	69,997 50
Shawnee	63.50	952.50	857 25	1,334	66,700	56,695 00
Smith	.....	.....	.....	1,225	73,500	36,750 00
Sumner	44.75	671.25	604 13	1,283	64,150	54,527 50
Wabaunsee	15.00	225.00	202 50	860	43,000	32,250 00
Washington	113.75	1,706.25	1,535 63	1,110	79,920	39,960 00
Wilson	113.75	1,706.25	1,535 63	660	29,040	21,780 00
Woodson	55.00	825.00	742 50	398	19,900	12,935 00
Wyandotte	32.00	480.00	432 00	1,586	158,600	79,300 00
Total	2,817.00	41,306.40	$37,175 84	62,601	3,324,129	$2,177,564 55

SUMMARY BY COUNTIES—Continued.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	SWEET POTATOES.			SORGHUM.		
	Acres.	*Bushels.*	*Value.*	*Acres.*	*Gallons.*	*Value.*
Allen	23.25	2,092.50	$2,092 50	512.25	58,908.75	$26,508 94
Anderson	11.63	1,023.44	1,023 44	219.87	25,285.05	11,378 27
Atchison	19.00	1,710.00	1,710 00	135.00	15,525.00	6,986 25
Barbour	49.25	2,955.00	2,955 00	85.00	9,775.00	4,398 75
Barton	63.00	1,890.00	1,890 00	480.50	55,257.50	24,865 88
Bourbon	42.19	3,375.20	3,375 20	666.87	76,690.05	34,510 52
Brown	7.07	636.30	636 30	157.05	18,060.75	8,127 34
Butler	66.87	4,480.29	4,480 29	598.84	68,866.60	30,989 97
Chautauqua	31.07	1,864.20	1,864 20	510.63	58,722.45	26,425 10
Chase	11.06	774.20	774 20	96.28	11,072.20	4,982 49
Cherokee	75.25	3,762.50	3,762 50	1,090.75	125,436.25	56,446 31
Clay	16.95	1,695.00	1,695 00	126.25	14,518.75	6,533 44
Cloud	24.00	1,560.00	1,560 00	164.00	18,860.00	8,487 00
Coffey	21.90	2,190.00	2,190 00	244.20	28,083.00	12,637 35
Cowley	47.83	4,783.00	4,783 00	512.61	58,950.15	26,527 57
Crawford	51.12	5,112.00	5,112 00	1,013.50	116,552.50	52,448 63
Davis	18.00	1,440.00	1,440 00	60.00	6,900.00	3,105 00
Dickinson	60.00	6,000.00	6,000 00	79.00	9,085.00	4,088 25
Doniphan	13.00	1,300.00	1,300 00	133.00	15,295.00	6,882 75
Douglas	108.75	10,875.00	10,875 00	272.00	31,280.00	14,076 00
Edwards	60.00	600.00	600 00	99.75	11,471.25	5,162 06
Elk	22.56	1,353.60	1,353 60	417.00	47,955.00	21,579 75
Ellis	1.50	60.00	60 00	59.00	6,785.00	3,053 25
Ellsworth	40.63	2,437.80	2,437 80	91.25	10,493.75	4,722 19
Ford	5.00	25.00	25 00	10.00	1,150.00	517 50
Franklin	22.50	2,025.00	2,025 00	397.50	45,712.50	20,570 63
Greenwood	30.20	1,812.00	1,812 00	275.80	31,717.00	14,272 65
Harper	33.62	840.50	840 50	90.75	10,436.25	4,696 31
Harvey	52.62	2,788.86	2,788 86	162.00	18,630.00	8,383 50
Jackson	4.62	383.46	383 46	193.83	22,290.45	10,030 70
Jefferson	22.65	1,585.50	1,585 50	313.60	36,064.00	16,228 80
Jewell	15.37	1,460.15	1,460 15	385.00	44,275.00	19,923 75
Johnson	77.62	7,762.00	7,762 00	331.12	38,078.80	17,135 46
Kingman	20.25	405.00	405 00	218.75	25,156.25	11,320 31
Labette	128.40	8,988.00	8,988 00	986.00	113,390.00	51,025 50
Leavenworth	104.12	6,976.04	6,976 04	330.87	38,050.05	17,122 52
Lincoln	89.00	5,785.00	5,785 00	93.00	10,695.00	4,812 75
Linn	12.50	750.00	750 00	667.00	76,705.00	34,517 25
Lyon	46.00	3,680.00	3,680 00	223.65	25,719.75	11,573 89
Marion	12.43	1,243.00	1,243 00	270.00	31,050.00	13,972 50
Marshall	4.87	389.60	389 60	242.25	27,858.75	12,536 44
McPherson	44.00	4,400.00	4,400 00	187.40	21,551.00	9,697 95
Miami	38.50	3,850.00	3,850 00	483.25	55,573.75	25,008 19
Mitchell	36.97	2,218.20	2,218 20	231.50	26,622.50	11,980 13
Montgomery	81.70	6,127.50	6,127 50	706.50	81,247.50	36,561 38
Morris	10.88	870.40	870 40	180.00	20,700.00	9,315 00
Nemaha	15.51	1,551.00	1,551 00	175.62	20,196.30	9,088 34
Neosho	44.66	3,572.80	3,572 80	753.06	86,601.90	38,970 86
Norton	3.50	350.00	350 00	249.00	28,635.00	12,885 75
Osage	25.12	1,758.40	1,758 40	309.37	35,577.55	16,009 90
Osborne	3.25	260.00	260 00	595.25	68,453.75	30,804 19
Ottawa	11.87	712.20	712 20	222.00	25,530.00	11,488 50
Pawnee	86.75	1,908.50	1,908 50	432.00	49,680.00	22,356 00
Phillips	5.25	525.00	525 00	449.89	51,737.35	23,281 81
Pottawatomie	23.85	2,385.00	2,385 00	309.25	35,563.75	16,003 69
Pratt	3.50	35.00	35 00	153.00	17,595.00	7,917 75
Reno	125.00	6,250.00	6,250 00	560.25	64,428.75	28,992 94
Republic	11.00	1,100.00	1,100 00	251.41	28,912.15	13,010 47
Rice	48.00	1,440.00	1,440 00	157.37	18,097.55	8,143 90
Riley	17.50	1,750.00	1,750 00	157.50	18,112.50	8,150 63
Rooks	10.00	900.00	900 00	268.00	30,820.00	13,869 00
Rush	9.00	90.00	90 00	367.00	42,205.00	18,992 25
Russell	25.50	1,530.00	1,530 00	127.00	14,605.00	6,572 25
Saline	33.35	2,901.45	2,901 45	186.25	21,418.75	9,638 44
Sedgwick	64.62	4,523.40	4,523 40	339.00	38,985.00	17,543 25
Shawnee	84.50	8,450.00	8,450 00	149.25	17,163.75	7,723 69
Smith	6.75	675.00	675 00	525.25	60,403.75	27,181 69
Sumner	61.89	6,189.00	6,189 00	481.17	55,334.55	24,900 55
Wabaunsee	14.50	1,377.50	1,377 50	243.25	27,973.75	12,588 19
Washington	9.94	695.80	695 80	409.00	47,035.00	21,165 75
Wilson	44.75	2,685.00	2,685 00	591.25	67,993.75	30,597 19
Woodson	10.95	657.00	657 00	271.75	31,251.25	14,063 06
Wyandotte	148.00	14,800.00	14,800 00	127.35	14,645.25	6,590 36
Total	2,728.21	197,407.29	$197,407 29	23,664.86	2,721,458.90	$1,224,656 57

SUMMARY BY COUNTIES—CONTINUED.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	CASTOR BEANS.			COTTON.		
	Acres.	*Bushels.*	*Value.*	*Acres.*	*Pounds.*	*Value.*
Allen	1,105.50	13,266.00	$13,266 00	3.25	552.50	$49 73
Anderson	182.00	2,184.00	2,184 00	.....	.....	.....
Atchison	8.00	96.00	96 00	10.00	1,700.00	153 00
Barbour	.....	.....	.....	.....	.....	.....
Barton	.....	.....	.....	5.00	850.00	76 50
Bourbon	3,349.00	36,839.00	36,839 00	13.00	2,210.00	198 90
Brown	.....	.....	.....	.25	42.50	3 83
Butler	15.96	191.52	191 52	.62	105.40	9 49
Chautauqua	59.00	590.00	590 00	1.12	190.40	17 14
Chase	16.25	162.50	162 50	.....	.....	.....
Cherokee	2,056.00	22,616.00	22,616 00	.12	20.40	1 84
Clay	299.50	3,594.00	3,594 00	.....	.....	.....
Cloud	232.00	2,784.00	2,784 00	.....	.....	.....
Coffey	471.50	5,186.50	5,186 50	.....	.....	.....
Cowley	57.50	575.00	575 00	2.75	467.50	42 08
Crawford	7,305.00	87,660.00	87,660 00	29.25	4,972.50	447 53
Davis	8.00	80.00	80.00	.....	.....	.....
Dickinson	5.00	50.00	50 00	.25	42.50	3 83
Doniphan	11.00	132.00	132 00	.....	.....	.....
Douglas	1,023.50	12,282.00	12,282 00	.....	.....	.....
Edwards	1.00	.....	.....	.....	.....	.....
Elk	1,492.00	17,904.00	17,904 00	1.62	275.40	24 79
Ellis	.....	.....	.....	.....	.....	.....
Ellsworth	19.00	190.00	190 00	.50	85.00	7 65
Ford	.....	.....	.....	.....	.....	.....
Franklin	13,095.25	170,238.25	170,238 25	.....	.....	.....
Greenwood	340.00	4,080.00	4,080 00	13.60	2,312.00	208 08
Harper	.....	.....	.....	.12	20.40	1 84
Harvey	1.00	10.00	10 00	.....	.....	.....
Jackson	.....	.....	.....	.....	.....	.....
Jefferson	38.00	380.00	380 00	.65	110.50	9 95
Jewell	.50	5.00	5 00	1.00	170.00	15 30
Johnson	3,223.50	41,905.50	41,905 50	.50	85.00	7 65
Kingman	.25	2.00	2 00	12.00	2,040.00	183 60
Labette	6,603.50	79,242.00	79,242 00	17.50	2,975.00	267 75
Leavenworth	26.00	312.00	312 00	.....	.....	.....
Lincoln	.....	.....	.....	.....	.....	.....
Linn	798.00	7,980.00	7,980 00	23.50	3,995.00	359 55
Lyon	.....	.....	.....	.25	42.50	3 83
Marion	.....	.....	.....	.....	.....	.....
Marshall	2.00	24.00	24 00	.....	.....	.....
McPherson	42.50	467.50	467 50	.....	.....	.....
Miami	2,160.00	30,240.00	30,240 00	21.00	3,570.00	321 30
Mitchell	4.00	44.00	44 00	.25	42.50	3 83
Montgomery	1,007.00	10,070.00	10,070 00	1.24	210.80	18 97
Morris	16.25	162.50	162 50	.....	.....	.....
Nemaha	9.75	117.00	117 00	.25	42.50	3 83
Neosho	15,990.25	143,912.25	143,912 25	.....	.....	.....
Norton	.....	.....	.....	.....	.....	.....
Osage	4,966.00	49,660.00	49,660 00	1.00	170.00	15 30
Osborne	.....	.....	.....	.....	.....	.....
Ottawa	.12	1.20	1 20	.....	.....	.....
Pawnee	87.75	263.25	263 25	.....	.....	.....
Phillips	10.00	100.00	100 00	.12	20.40	1 84
Pottawatomie	.12	1.20	1 20	1.00	170.00	15 30
Pratt	.....	.....	.....	.....	.....	.....
Reno	57.00	342.00	342 00	.25	42.50	3 83
Republic	16.75	201.00	201 00	.....	.....	.....
Rice	1.00	7.00	7 00	.....	.....	.....
Riley	.....	.....	.....	.....	.....	.....
Rooks	19.00	190.00	190 00	.....	.....	.....
Rush	.....	.....	.....	.....	.....	.....
Russell	.....	.....	.....	.....	.....	.....
Saline	28.00	280.00	280 00	1.25	212.50	19 13
Sedgwick	25.00	250.00	250 00	.....	.....	.....
Shawnee	85.25	1,023.00	1,023 00	.....	.....	.....
Smith	.....	.....	.....	.....	.....	.....
Sumner	69.87	698.70	698 70	2.75	467.50	42 08
Wabaunsee	74.00	814.00	814 00	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....
Wilson	1,408.25	14,082.50	14,082 50	31.37	5,332.90	479 96
Woodson	241.50	2,415.00	2,415 00	.....	.....	.....
Wyandotte	15.00	240.00	240 00	.25	42.50	3 83
Total	68,179.07	766,143.37	$766,143 37	197.58	33,588.60	$3,023 06

SUMMARY BY COUNTIES—Continued.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	FLAX.			HEMP.		
	Acres.	*Bushels.*	*Value.*	*Acres.*	*Pounds.*	*Value.*
Allen	540.00	3,780.00	$3,780 00	2.00	1,840.00	$110 40
Anderson	158.00	1,580.00	1,580 00			
Atchison	6,181.00	61,810.00	61,810 00	20.00	18,400.00	1,104 00
Barbour	4.00	16.00	16 00			
Barton	17.00	68.00	68 00			
Bourbon	4,236.00	21,180.00	21,180 00			
Brown	327.50	3,275.00	3,275 00	.25	230.00	13 80
Butler	114.00	1,026.00	1,026 00			
Chautauqua	185.00	1,480.00	1,480 00			
Chase	4.50	31.50	31 50	4.00	3,680.00	220 80
Cherokee	2,988.00	14,940.00	14,940 00	60.12	55,310.40	3,318 62
Clay	107.25	1,179.75	1,179 75			
Cloud	123.50	1,235.00	1,235 00			
Coffey	88.00	880.00	880 00			
Cowley	789.25	9,471.00	9,471 00	.75	690.00	41 40
Crawford	6,407.00	44,849.00	44,849 00			
Davis	5.00	45.00	45 00			
Dickinson	17.00	136.00	136 00			
Doniphan	73.00	876.00	876 00	5.00	4,600.00	276 00
Douglas	1,719.50	20,634.00	20,634 00	97.50	89,700.00	5,382 00
Edwards	1.00					
Elk	728.00	5,096.00	5,096 00			
Ellis	.25	2.50	2 50			
Ellsworth						
Ford						
Franklin	793.00	9,516.00	9,516 00			
Greenwood	469.00	4,690.00	4,690 00			
Harper						
Harvey	20.25	162.00	162 00			
Jackson	1,602.50	16,025.00	16,025 00			
Jefferson	1,553.50	15,535.00	15,535 00			
Jewell	33.00	264.00	264 00			
Johnson	20,100.00	201,000.00	201,000 00	57.00	52,440.00	3,146 40
Kingman	15.00	60.00	60 00			
Labette	575.00	4,025.00	4,025 00			
Leavenworth	322.00	3,542.00	3,542 00	32.00	29,440.00	1,766 40
Lincoln	6.50	58.50	58 50	1.00	920.00	55 20
Linn	652.00	5,868.00	5,868 00	4.02	3,698.40	221 90
Lyon	6.00	54.00	54 00			
Marion	223.25	1,786.00	1,786 00			
Marshall	181.50	1,996.50	1,996 50	2.00	1,840.00	110 40
McPherson	498.00	4,980.00	4,980 00			
Miami	5,574.00	72,462.00	72,462 00	5.25	4,830.00	289 80
Mitchell	.25	2.25	2 25			
Montgomery	5,995.00	35,970.00	35,970 00	171.00	157,320.00	9,439 20
Morris	206.00	1,854.00	1,854 00			
Nemaha	394.06	3,940.60	3,940 60	.25	230.00	13 80
Neosho	1,994.06	13,958.42	13,958 42	4.00	3,680.00	220 80
Norton				3.50	3,220.00	193 20
Osage	400.00	4,800.00	4,800 00			
Osborne						
Ottawa	6.30	63.00	63 00	.50	460.00	27 60
Pawnee	360.50	1,081.50	1,081 50	.75	690.00	41 40
Phillips	9.00	72.00	72 00			
Pottawatomie	345.00	3,450.00	3,450 00			
Pratt	7.00					
Reno	.75	3.00	3 00			
Republic	26.50	238.50	238 50	20.00	18,400.00	1,104 00
Rice	140.00	700.00	700 00	1.00	920.00	55 20
Riley						
Rooks						
Rush	20.00					
Russell	5.00	30.00	30 00			
Saline						
Sedgwick	43.50	348.00	348 00			
Shawnee	894.50	8,945.00	8,945 00	4.00	3,680.00	220 80
Smith						
Sumner	244.00	2,440.00	2,440 00			
Wabaunsee	326.00	3,260.00	3,260 00	2.00	1,840.00	110 40
Washington	.25	2.50	2 50			
Wilson	348.25	3,482.50	3,482 50			
Woodson	74.00	740.00	740 00			
Wyandotte	105.00	1,260.00	1,260 00	108.50	99,820.00	5,989 20
Total	69,383.17	622,256.02	$622,256 02	606.39	557,878.80	$33,472 72

SUMMARY BY COUNTIES—CONTINUED.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	TOBACCO.			BROOM CORN.		
	Acres.	*Pounds.*	*Value.*	*Acres.*	*Pounds.*	*Value.*
Allen	14.00	10,360.00	$1,036 00	309.00	200,850.00	$7,029 75
Anderson	8.63	6,386.20	638 62	10.50	6,825.00	238 88
Atchison	3.00	2,220.00	222 00	109.00	73,030.00	2,556 05
Barbour	.....	.....	.....	.....	.....	.....
Barton	13.00	9,620.00	962 00	99.00	44,550.00	1,559 25
Bourbon	16.64	12,313.60	1,231 36	323.25	161,625.00	5,656 88
Brown	3.62	2,678.80	267 88	124.00	84,320.00	2,951 20
Butler	12.84	9,501.60	950 16	87.12	58,021.92	2,030 77
Chautauqua	19.31	14,289.40	1,428 94	18.63	12,482.10	436 87
Chase	27.00	19,980.00	1,998 00	24.06	12,030.00	421 05
Cherokee	16.00	11,840.00	1,184 00	240.50	168,350.00	5,892 25
Clay	2.25	1,665.00	166 50	66.00	39,600.00	1,386 00
Cloud	15.25	11,285.00	1,128 50	243.50	133,925.00	4,687 38
Coffey	14.98	11,085.20	1,108 52	19.00	13,300.00	465 50
Cowley	16.51	12,217.40	1,221 74	40.11	26,713.26	934 96
Crawford	16.75	12,395.00	1,239 50	255.75	179,025.00	6,265 88
Davis	4.00	2,960.00	296 00	12.00	7,992.00	279 72
Dickinson	5.25	3,885.00	388 50	14.00	9,324.00	326 34
Doniphan	5.00	3,700.00	370 00	96.00	67,200.00	2,352 00
Douglas	3.75	2,775.00	277 50	92.50	64,750.00	2,266 25
Edwards	2.00	1,480.00	148 00	108.50	21,700.00	759 50
Elk	9.75	7,215.00	721 50	93.12	62,390.40	2,183 66
Ellis	6.50	4,810.00	481 00	.....	.....	.....
Ellsworth	12.35	9,139.00	913 90	56.00	28,000.00	980 00
Ford	.....	.....	.....	10.00	2,000.00	70 00
Franklin	165.13	122,196.20	12,219 62	21.00	14,700.00	514 50
Greenwood	3.20	2,368.00	236 80	41.80	27,838.80	974 36
Harper	.75	555.00	55 50	4.75	1,900.00	66 50
Harvey	8.25	6,105.00	610 50	120.00	60,000.00	2,100 00
Jackson	3.95	2,923.00	292 30	20.12	13,480.40	471 81
Jefferson	6.70	4,958.00	495 80	14.00	9,380.00	328 30
Jewell	28.12	20,808.80	2,080 88	242.12	133,166.00	4,660 81
Johnson	7.00	5,180.00	518 00	266.25	186,375.00	6,523 13
Kingman	.25	185.00	18 50	29.50	11,800.00	413 00
Labette	23.53	17,412.00	1,741 22	130.19	91,133.00	3,189 66
Leavenworth	6.52	4,824.80	482 48	30.37	20,347.90	712 18
Lincoln	12.62	9,338.80	933 88	96.00	52,800.00	1,848 00
Linn	9.00	6,660.00	666 00	72.25	50,575.00	1,770 13
Lyon	3.25	2,405.00	240 50	3.55	2,485.00	86 98
Marion	3.19	2,360.60	236 06	20.50	11,275.00	394 63
Marshall	12.00	8,880.00	888 00	456.00	300,960.00	10,533 60
McPherson	2.25	1,665.00	166 50	5,146.00	2,830,300.00	99,060 50
Miami	17.37	12,853.80	1,285 38	115.25	74,912.50	2,621 94
Mitchell	3.62	2,678.80	267 88	845.75	490,535.00	17,168 73
Montgomery	19.97	14,777.80	1,477 78	44.50	29,637.00	1,037 30
Morris	1.42	1,050.80	105 08	100.00	55,000.00	1,925 00
Nemaha	8.69	6,430.60	643 06	31.25	20,625.00	721 88
Neosho	19.07	14,111.80	1,411 18	286.37	200,459.00	7,016 07
Norton	22.50	16,650.00	1,665 00	31.50	18,900.00	661 50
Osage	2.62	1,938.80	193 88	174.00	121,800.00	4,263 00
Osborne	1.75	1,295.00	129 50	103.25	56,787.50	1,987 56
Ottawa	1.87	1,383.80	138 38	51.00	29,580.00	1,035 30
Pawnee	1.25	925.00	92 50	466.62	93,324.00	3,266 34
Phillips	7.50	5,550.00	555 00	44.50	29,637.00	1,037 30
Pottawatomie	9.94	7,355.60	735 56	277.00	180,050.00	6,301 75
Pratt	.50	370.00	37 00	11.00	2,750.00	96 25
Reno	7.50	5,550.00	555 00	109.25	32,775.00	1,147 13
Republic	3.90	2,886.00	288 60	34.37	18,903.50	661 62
Rice	1.50	1,110.00	111 00	345.00	172,500.00	6,037 50
Riley	1.75	1,295.00	129 50	52.00	34,320.00	1,201 20
Rooks	2.00	1,480.00	148 00	7.50	3,750.00	131 25
Rush	7.00	5,180.00	518 00	73.00	21,900.00	766 50
Russell	4.00	2,960.00	296 00	20.00	10,000.10	350 00
Saline	1.60	1,184.00	118 40	932.00	466,000.00	16,310 00
Sedgwick	3.00	1,220.00	222 00	25.75	17,149.50	600 23
Shawnee	1.82	1,346.80	134 68	39.00	26,130.00	914 55
Smith	8.75	6,475.00	647 50	283.25	188,644.50	6,602 56
Sumner	6.75	4,995.00	499 50	61.75	41,125.50	1,439 39
Wabaunsee	2.50	1,850.00	185 00	11.00	7,326.00	256 41
Washington	7.50	5,550.00	555 00	44.50	26,700.00	934 50
Wilson	16.89	12,498.60	1,249 86	450.00	299,700.00	10,489 50
Woodson	5.00	3,700.00	370 00	13.25	8,824.50	308 86
Wyandotte	8.75	6,475.00	647 50	23.60	18,880.00	660 80
Total	752.37	556,753.80	$55,675 38	14,273.15	8,095,145.28	$283,330 15

SUMMARY BY COUNTIES—Continued.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	MILLET AND HUNGARIAN.			TIMOTHY MEADOW.		
	Acres.	*Tons.*	*Value.*	*Acres.*	*Tons.*	*Value.*
Allen	1,546	4,638	$18,552 00	161.00	241.50	$1,207 50
Anderson	1,032	3,096	12,384 00	323.00	484.50	2,422 50
Atchison	739	2,217	11,085 00	4,163.00	6,660.80	39,964 80
Barbour	1,866	3,732	22,392 00	.....	.....	.....
Barton	4,463	8,926	49,093 00	248.00	248.00	1,364 00
Bourbon	1,495	4,485	17,940 00	870.50	1,131.65	5,658 25
Brown	456	1,368	5,472 00	2,624.00	5,248.00	26,240 00
Butler	6,492	19,476	77,904 00	323.75	647.50	3,237 50
Chautauqua	7,565	22,695	85,106 25	223.50	424.65	1,910 93
Chase	1,052	3,156	12,624 00	299.50	299.50	1,497 50
Cherokee	3,158	9,474	37,896 00	877.00	1,052.40	5,262 00
Clay	1,651	4,953	18,821 40	40.00	60.00	300 00
Cloud	1,517	4,551	15,928 50	50.00	75.00	337 50
Coffey	1,183	3,549	14,196 00	319.25	478.88	2,394 40
Cowley	4,827	14,481	65,164 50	419.75	839.50	3,358 00
Crawford	1,644	4,932	19,728 00	823.50	988.20	4,941 00
Davis	1,432	4,296	17,184 00	11.00	14.30	71 50
Dickinson	3,600	10,800	43,200 00	251.00	301.20	1,506 00
Doniphan	470	1,410	5,640 00	2,438.00	4,876.00	24,380 00
Douglas	1,536	4,608	23,040 00	4,679.00	7,486.40	44,918 40
Edwards	2,901	5,802	34,812 00	9.50	.....	.....
Elk	4,209	12,627	47,351 25	211.25	422.50	1,901.25
Ellis	3,071	6,142	26,103 50	7.00	5.60	33.60
Ellsworth	2,329	5,823	24,747 75	11.50	11.50	57.50
Ford	990	1,980	15,840 00	.....	.....	.....
Franklin	869	2,607	13,035 00	2,760.25	5,520.50	27,602.50
Greenwood	1,885	5,655	21,489 00	151.80	273.24	1,297 89
Harper	657	1,314	8,212 50	.....	.....	.....
Harvey	1,312	3,936	15,744 00	648.00	777.60	3,888 00
Jackson	2,453	7,359	29,436 00	1,194.00	2,268.60	11,343 00
Jefferson	3,011	9,033	36,132 00	1,162.25	2,324.50	11,622 50
Jewell	2,475	7,425	25,987 50	223.25	334.88	1,506 96
Johnson	792	2,376	10,692 00	9,998.50	9,998.50	54,991 75
Kingman	451	902	4,961 00	.....	.....	.....
Labette	2,830	8,490	33,960 00	1,735.50	2,603.25	13,016 25
Leavenworth	1,455	4,365	26,190 00	4,962.50	7,940.00	63,520 00
Lincoln	1,630	4,890	17,115 00	3.00	3.60	16 20
Linn	2,009	6,027	24,108 00	1,729.00	2,593.50	12,967 50
Lyon	2,520	7,560	30,240 00	240.00	408.00	2,040 00
Marion	773	2,319	11,595 00	576.75	692.10	4,152 60
Marshall	1,428	4,284	17,136 00	366.50	733.00	3,665 00
McPherson	2,789	8,367	33,468 00	510.00	510.00	2,550 00
Miami	3,055	9,165	38,951 25	3,808.00	3,808.00	19,992 00
Mitchell	2,287	6,861	24,013 50	54.00	64.80	291 60
Montgomery	3,823	11,469	45,876 00	1,188.00	2,376.00	11,286 00
Morris	1,875	5,625	22,500 00	38.00	57.00	285 00
Nemaha	999	2,997	11,988 00	457.25	914.50	4,572 50
Neosho	2,639	7,917	31,668 00	400.00	520.00	2,600 00
Norton	1,857	5,571	22,284 00	16.00	24.00	120 00
Osage	3,302	9,906	39,624 00	428.50	857.00	4,285 00
Osborne	2,699	8,097	28,339 50	.....	.....	.....
Ottawa	2,409	7,227	27,101 25	122.00	183.00	823 50
Pawnee	6,201	12,402	62,010 00	95.00	95.00	570 00
Phillips	2,345	7,035	26,733 00	12.12	18.18	81 81
Pottawatomie	2,808	8,424	33,696 00	132.00	264.00	1,320 00
Pratt	322	644	3,864 00	.....	.....	.....
Reno	3,456	6,912	27,648 00	98.00	98.00	465 50
Republic	603	1,809	6,331 50	136.50	273.00	1,228 50
Rice	2,781	5,562	25,029 00	157.75	157.75	788 75
Riley	2,340	7,020	28,080 00	11.00	16.50	82 50
Rooks	1,657	4,971	19,884 00	.50	.50	2 50
Rush	4,430	13,290	53,160 00	1.00	.....	.....
Russell	2,770	6,925	29,431 25	.....	.....	.....
Saline	3,135	9,405	37,620 00	102.90	123.48	617 40
Sedgwick	3,437	10,311	39,181 80	382.50	459.00	2,295 00
Shawnee	4,273	12,819	60,890 25	1,332.50	2,665.00	13,325 00
Smith	2,648	7,944	27,804 00	2.00	3.00	13 50
Sumner	9,207	27,621	96,673 50	698.75	838.50	4,192 50
Wabaunsee	1,994	5,982	29,910 00	52.00	78.00	390 00
Washington	793	2,379	9,516 00	67.56	135.12	675 60
Wilson	2,777	8,331	31,657 80	549.25	1,098.50	5,162 95
Woodson	1,160	3,480	13,224 00	259.00	310.80	1,460 76
Wyandotte	245	735	5,880 00	1,233.75	2,467.50	19,740 00
Total	174,890	494,962	$2,042,275 75	57,481.13	86,884.98	$483,812 15

SUMMARY BY COUNTIES—CONTINUED.

Showing number of acres, product, and value of crop, for 1879.

COUNTIES.	CLOVER MEADOW.			PRAIRIE MEADOW.		
	Acres.	*Tons.*	*Value.*	*Acres.*	*Tons.*	*Value.*
Allen	75.50	113.25	$566 25	30,538	36,645.60	$109,936 80
Anderson	171.50	257.25	1,286 25	13,547	17,611.10	52,833 30
Atchison	688.00	1,376.00	8,256 00	15,946	23,919.00	95,676 00
Barbour	20.00	16.00	96 00	506	506.00	1,518 00
Barton	40.00	28.00	154 00	1,526	2,441.60	8,545 60
Bourbon	257.00	257.00	1,285 00	32,437	32,437.00	129,748 00
Brown	314.50	817.70	4,088 50	20,858	41,716.00	125,148 00
Butler	123.25	246.50	1,232 50	4,914	7,371.00	22,113 00
Chautauqua	16.75	33.50	150 75	5,174	5,174.00	14,228 50
Chase	23.25	23.25	116 25	10,801	12,961.20	38,883 60
Cherokee	87.50	105.00	525 00	15,733	20,452.90	61,358 70
Clay	4.25	6.38	31 90	10,455	20,910.00	52,275 00
Cloud	15.37	24.59	110 66	.....	.....	.....
Coffey	108.00	108.00	540 00	11,826	15,373.80	46,121 40
Cowley	135.75	271.50	1,086 00	5,261	8,943.70	22,359 25
Crawford	198.75	198.75	993 75	14,734	14,734.00	44,202 00
Davis	10.00	15.00	75 00	1,168	1,168.00	4,672 00
Dickinson	76.00	114.00	570 00	1,850	2,775.00	9,712 50
Doniphan	784.00	1,960.00	9,800 00	6,641	13,282.00	53,128 00
Douglas	936.00	1,123.20	6,739 20	17,385	26,077.50	91,271 25
Edwards	1.00	.....	.....	.....	.....	.....
Elk	139.50	279.00	1,255 50	6,369	8,279.70	22,769 18
Ellis	7.00	5.60	33 60	20	20.00	80 00
Ellsworth	6.00	6.00	33 00	14,877	22,315.50	78,104 25
Ford	.....	.....	.....	.....	.....	.....
Franklin	560.50	1,121.00	5,605 00	22,156	33,234.00	108,010 50
Greenwood	54.00	108.00	513 00	11,577	15,050.10	41,387 78
Harper	.....	.....	.....	.....	.....	.....
Harvey	70.25	70.25	351 25	5,658	7,355.40	22,066 20
Jackson	85.25	170.50	852 50	18,723	28,084.50	77,232 38
Jefferson	310.00	620.00	3,100 00	12,641	18,961.50	52,144 13
Jewell	10.62	19.12	86 04	4,459	7,134.40	17,836 00
Johnson	2,378.00	3,567.00	19,618 50	17,051	25,576.50	83,123 63
Kingman	.....	.....	.....	.....	.....	.....
Labette	347.25	555.60	2,778 00	10,376	13,488.80	39,117 52
Leavenworth	1,201.50	1,922.40	15,379 20	14,988	17,985.60	125,899 20
Lincoln	.....	.....	.....	838	1,257.00	3,142 50
Linn	587.00	880.50	4,402 50	34,540	51,810.00	155,430 00
Lyon	160.50	160.50	802 50	29,693	35,631.60	133,618 50
Marion	13.00	16.90	101 40	870	1,305.00	4,241 25
Marshall	35.00	70.00	350 00	14,394	23,030.40	69,091 20
McPherson	46.50	55.80	279 00	2,381	3,095.30	8,512 08
Miami	1,021.00	1,531.50	8,040 38	28,007	39,209.80	127,431 85
Mitchell	62.75	94.13	423 59	7,016	10,524.00	26,310 00
Montgomery	244.00	390.40	1,854 40	12,672	16,473.60	49,420 80
Morris	61.50	92.25	461 25	.....	.....	.....
Nemaha	114.75	229.50	1,147 50	18,123	28,996.80	86,990 40
Neosho	126.50	189.75	948 75	16,733	18,406.30	53,378 27
Norton	.....	.....	.....	.....	.....	.....
Osage	239.37	430.87	2,154 35	24,834	32,284.20	96,852 60
Osborne	.....	.....	.....	.....	.....	.....
Ottawa	5.00	7.00	31 50	802	1,203.00	3,007 50
Pawnee	10.00	10.00	60 00	377	377.00	1,508 00
Phillips	6.00	9.00	45 00	1,296	2,332.80	6,998 40
Pottawatomie	93.50	149.60	748 00	18,645	31,696.50	87,165 38
Pratt	.25	.13	65	.....	.....	.....
Reno	13.50	13.50	64 13	.....	.....	.....
Republic	52.62	105.24	473 58	1,700	3,060.00	7,650 00
Rice	33.50	33.50	167 50	100	150.00	450 00
Riley	7.00	10.50	52 50	7,397	14,794.00	55,477 50
Rooks	.....	.....	.....	.....	.....	.....
Rush	5.00	2.50	12 50	.....	.....	.....
Russell	41.00	61.50	338 25	448	537.60	1,612 80
Saline	10.50	12.60	63 00	5,406	8,109.00	24,327 00
Sedgwick	48.25	62.73	313 65	13,973	16,767.60	58,686 60
Shawnee	238.00	476.00	2,380 00	12,458	17,441.20	61,044 20
Smith	.....	.....	.....	.....	.....	.....
Sumner	121.85	182.78	913 90	4,040	5,656.00	16,968 00
Wabaunsee	.50	1.00	5 00	7,246	8,695.20	30,433 20
Washington	18.00	36.00	180 00	120	240.00	720 00
Wilson	229.75	344.63	1,619 76	27,491	41,236.50	113,400 38
Woodson	45.50	68.25	320 78	19,890	25,857.00	71,106 75
Wyandotte	1,822.00	4,555.00	36,440 00	1,309	1,576.80	10,995 60
Total	14,769.83	25,822.90	$152,503 92	672,994	943,653.60	$3,017,472 43

SUMMARY BY COUNTIES—Concluded.

Showing number of acres in 1879.

COUNTIES.	TIMOTHY PASTURE.	CLOVER PASTURE.	BLUE-GRASS PASTURE.	PRAIRIE PASTURE.
	Acres.	*Acres.*	*Acres.*	*Acres.*
Allen	15.00	64.50	512.00	12,323
Anderson	55.50	10.00	370.50	6,453
Atchison	457.00	413.00	3,913.00	18,468
Barbour	.....	.....	.....	1,360
Barton	6.00	5.00	.....	2,459
Bourbon	85.00	9.00	43.00	19,056
Brown	850.00	77.00	567.50	13,661
Butler	17.00	13.00	138.50	33,203
Chautauqua	27.00	.....	237.25	4,932
Chase	4.00	124.00	114.00	8,599
Cherokee	184.00	56.00	309.50	25,547
Clay	24.00	.....	.....	9,006
Cloud	.....	.....	.....	2,869
Coffey	19.00	6.00	82.00	13,642
Cowley	30.88	146.25	2,046.38	21,281
Crawford	266.00	128.00	934.50	29,194
Davis	.....	.....	5.00	16,409
Dickinson	380.00	152.00	8.11	28,331
Doniphan	919.00	228.00	543.00	15,123
Douglas	752.00	257.00	1,642.00	24,093
Edwards	8.50	5.00	5.00	18,961
Elk	2.00	1.50	137.00	3,621
Ellis	.....	.....	.....	1,100
Ellsworth	32.00	7.00	.....	595
Ford	.....	.....	.....	800
Franklin	225.00	67.50	676.12	13,944
Greenwood	15.00	3.80	32.80	6,349
Harper	.....	.....	.....	.....
Harvey	78.50	17.00	44.50	7,803
Jackson	61.00	19.00	230.25	7,957
Jefferson	283.00	147.00	877.25	10,328
Jewell	10.00	.....	.50	15,427
Johnson	3,915.00	2,155.50	5,190.25	26,101
Kingman	.....	.....	.....	.....
Labette	167.00	30.00	632.75	30,792
Leavenworth	1,320.50	932.00	6,896.00	11,428
Lincoln	.....	.....	.....	1,308
Linn	1,217.00	60.00	317.00	21,061
Lyon	214.00	45.50	324.50	7,332
Marion	124.00	.....	6.25	10,538
Marshall	31.00	145.00	141.00	69,721
McPherson	44.50	2.00	.37	15,921
Miami	761.00	443.00	803.00	28,080
Mitchell	3.00	.....	.50	27,744
Montgomery	163.00	49.00	795.00	34,715
Morris	2.00	9.00	374.50	7,550
Nemaha	75.00	6.50	278.00	6,279
Neosho	32.00	36.00	689.00	36,553
Norton	.....	.....	.....	1,302
Osage	62.50	52.00	434.00	14,550
Osborne	.....	.....	.....	792
Ottawa	.....	5.00	60.00	7,718
Pawnee	14.50	.....	1.12	1,790
Phillips	10.00	.....	.....	13,193
Pottawatomie	31.00	8.00	80.00	11,371
Pratt	.....	.....	.....	.....
Reno	2.00	1.00	3.30	.....
Republic	2.00	.....	1.00	3,612
Rice	45.00	4.00	2.75	1,644
Riley	4.00	27.00	.....	9,677
Rooks	.....	.25	1.00	1,185
Rush	.....	.....	.....	756
Russell	.....	.....	.....	340
Saline	12.00	3.00	16.00	9,033
Sedgwick	118.50	8.00	45.50	15,337
Shawnee	173.00	12.00	534.25	9,364
Smith	.....	.....	.....	2,585
Sumner	68.50	.....	102.62	48,336
Wabaunsee	26.00	5.00	103.00	16,582
Washington	13.00	.....	7.50	7,678
Wilson	80.00	107.00	393.50	29,060
Woodson	12.00	6.50	52.00	18,163
Wyandotte	663.00	898.50	4,411.50	3,741
Total	14,212.38	7,007.30	36,166.82	955,826

A GENERAL SUMMARY,

Showing number of acres, amount and value of each product of principal crops of the farm, for 1879.

Products.	*Acres.*	*Product.*	*Value of product.*
Winter wheat.....bu.	1,520,659.00	17,560,259.00	$16,087,403 69
Rye.....bu.	43,675.00	660,409.00	264,163 60
Spring wheat.....bu.	412,139.00	2,990,677.00	2,361,307 45
Corn.....bu.	2,995,070.00	108,704,927.00	26,562,674 46
Barley.....bu.	45,851.00	720,092.00	360,046 00
Oats.....bu.	573,982.00	13,326,637.00	3,397,416 33
Buckwheat.....bu.	2,817.00	41,306.40	37,175 84
Irish potatoes.....bu.	62,601.00	3,324,129.00	2,177,564 55
Sweet potatoes.....bu.	2,728.21	197,407.29	197,407 29
Sorghum.....gall.	23,664.86	2,721,458.90	1,224,656 57
Castor beans.....bu.	68,179.07	766,143.37	766,143 37
Cotton.....lbs.	197.58	33,588.60	3,023 06
Flax.....bu.	69,383.17	622,256.02	622,256 02
Hemp.....lbs.	606.39	557,878.80	33,472 72
Tobacco.....lbs.	752.37	556,753.80	55,675 38
Broom corn.....lbs.	14,273.15	8,095,145.28	283,330 15
Millet and Hungarian.....tons.	174,890.00	494,962.00	2,042,275 75
Timothy meadow.....tons.	57,481.13	86,884.98	483,812 15
Clover meadow.....tons.	14,769.83	25,822.90	152,503 92
Prairie meadow.....tons.	672,994.00	943,653.60	3,017,472 43
Timothy pasture.....acres	14,212.38	.....	.....
Clover pasture.....acres.	7,007.30	.....	.....
Blue-grass pasture.....acres.	36,166.82	.....	.....
Prairie pasture.....acres.	955,826.00	.....	.....
Total.....	7,769,926.26	.....	$60,129,780 73

ACREAGE—STATE SUMMARY.

TABLE showing the acreage of Farm Crops for 1878 and 1879, together with the increase and decrease for one year, as per assessors' returns reported to the State Board of Agriculture by county clerks.

Crops.	*Acreage for 1878.*	*Acreage for 1879.*	*Increase.*	*Decrease.*	*Per cent. of increase.*	*Per cent. of decrease.*
Winter wheat.....	1,297,555.00	1,520,659.00	223,104.00	.....	.17+	.....
Rye.....	127,842.00	43,675.00	.....	84,167.00	.....	.66—
Spring wheat.....	433,257.00	412,139.00	.....	21,118.00	.....	.05—
Corn.....	2,405,482.00	2,995,070.00	589,588.00	.....	.25—	.....
Barley.....	56,255.00	45,851.00	.....	10,404.00	.....	.18+
Oats.....	444,191.00	573,982.00	129,791.00	.....	.19+	.....
Buckwheat.....	4,582.66	2,817.00	.....	1,765.66	.....	.39—
Irish potatoes.....	51,239.00	62,601.00	11,362.00	.....	.22+	.....
Sweet potatoes.....	2,266.93	2,728.21	461.28	.....	.20+	.....
Sorghum.....	20,291.88	23,664.86	3,372.98	.....	.12—	.....
Castor beans.....	30,928.75	68,179.07	37,250.32	.....	1.20—	.....
Cotton.....	509.30	197.58	.....	311.72	.....	.61+
Flax.....	37,001.70	69,383.17	32,381.47	.....	.88—	.....
Hemp.....	529.79	606.39	76.60	.....	.14+	.....
Tobacco.....	553.15	752.37	199.22	.....	.36+	.....
Broom corn.....	20,220.17	14,273.15	.....	5,947.02	.....	.29+
Millet and Hungarian.....	144,081.00	174,890.00	30,809.00	.....	.21+	.....
Timothy meadow.....	40,121.12	57,481.13	17,360.01	.....	.43+	.....
Clover meadow.....	12,429.42	14,764.83	2,335.41	.....	.19—	.....
Prairie meadow.....	667,503.00	672,994.00	5,491.00	.....	.01—	.....
Timothy pasture.....	8,820.00	1,421.38	.....	7,398.62	.....	.84—
Clover pasture.....	3,770.25	7,007.30	3,237.05	.....	.86—	.....
Blue-grass pasture.....	27,876.73	36,166.82	8,290.09	.....	.30—	.....
Prairie pasture.....	701,421.00	955,826.00	254,405.00	.....	.36+	.....
Total.....	6,538,727.85	7,757,130.26	1,349,514.43	131,112.02	.19—	.....

AVERAGE YIELD—STATE SUMMARY.

Table showing average yield and cash value per acre, and price per bushel, gallon, pound or ton of farm products, for 1879.

Products.	*Average yield per acre.*	*Average price per bu., lb., or ton.*	*Average value per acre.*
Winter wheat ..... bu.	11.55—	$ .92—	$10 63—
Rye ..... bu.	15.12+	.40	6 05—
Spring wheat ..... bu.	7.25+	.79—	5 73—
Corn ..... bu.	36.29+	.24+	8 71—
Barley ..... bu.	15.70+	.50	7 85
Oats ..... bu.	23.22—	.25+	5 81—
Buckwheat ..... bu.	15.00	.90	13 50
Irish potatoes ..... bu.	53.10+	.66—	35 05—
Sweet potatoes ..... bu.	72.36—	1.00	72 36—
Sorghum ..... gall.	115.00	.45	51 75
Castor beans ..... bu.	11.24—	1.00	11 24—
Cotton ..... lbs.	170.00	.09	15 30
Flax ..... bu.	8.97—	1.00	8 97—
Hemp ..... lbs.	920.00	.06	55 20
Tobacco ..... lbs.	740.00	.10	74 00
Broom corn ..... lbs.	567.16—	.03½	19 85+
Millet and Hungarian ..... tons.	2.83+	4.13—	11 69—
Timothy meadow ..... tons.	1.51—	5.57—	8 41—
Clover meadow ..... tons.	1.75—	5.91—	10 34—
Prairie meadow ..... tons.	1.40—	3.19+	4 47—
Total for the State	.....	.....	$8 89+

LIVE-STOCK STATISTICS.

SUMMARY BY COUNTIES, showing the number and value of live stock, for 1879

COUNTIES.	HORSES.		MULES AND ASSES.		MILCH COWS.	
	Number	*Value.*	*Number.*	*Value.*	*Number.*	*Value.*
Allen	4,470	$241,380	609	$48,720	5,232	$141,264
Anderson	2,907	156,978	471	37,680	4,653	125,631
Atchison	4,980	268,920	1,104	88,320	6,132	165,564
Barbour	1,015	54,810	219	17,520	1,236	33,372
Barton	3,723	201,042	1,009	80,720	2,562	69,174
Bourbon	6,616	357,264	1,123	89,840	8,012	216,324
Brown	6,540	353,160	1,112	88,960	7,863	212,301
Butler	7,178	387,612	1,287	102,960	5,636	152,172
Chautauqua	3,975	214,650	775	62,000	5,684	153,468
Chase	2,755	148,770	180	14,400	1,867	50,409
Cherokee	5,384	290,736	1,600	128,000	4,740	127,980
Clay	5,163	278,802	441	35,280	3,334	90,018
Cloud	5,689	307,206	647	51,760	3,863	104,301
Coffey	4,037	217,998	794	63,520	6,661	179,847
Cowley	6,636	358,344	1,481	118,480	4,911	132,597
Crawford	5,411	292,194	1,500	120,000	4,904	132,408
Davis	2,905	156,870	217	17,360	2,647	71,469
Dickinson	5,684	306,936	804	64,320	3,506	94,662
Doniphan	4,239	228,906	1,332	106,560	3,813	102,151
Douglas	6,658	359,532	593	47,440	7,546	203,742
Edwards	747	40,338	235	18,800	541	14,607
Elk	3,354	181,116	522	41,760	4,513	121,851
Ellis	1,954	105,516	274	21,920	875	23,625
Ellsworth	2,337	126,198	307	24,560	1,558	43,066
Ford	628	33,912	162	12,960	293	7,911
Franklin	5,992	323,568	610	48,800	6,858	185,166
Greenwood	4,889	264,006	609	48,720	6,900	186,300
Harper	387	20,898	172	13,760	288	7,676
Harvey	3,348	180,792	646	51,680	2,383	64,341
Jackson	5,211	281,394	562	44,960	7,902	213,354
Jefferson	6,600	356,400	876	70,080	8,170	220,590
Jewell	6,518	351,972	929	74,320	4,286	115,722
Johnson	6,874	371,196	1,240	99,200	6,232	168,264
Kingman	537	28,998	222	17,760	377	10,179
Labette	6,001	324,054	1,455	116,400	5,898	159,246
Leavenworth	6,032	325,728	1,512	120,960	6,437	173,799
Lincoln	3,407	183,978	370	29,600	2,272	61,344
Linn	6,818	368,172	1,185	94,800	8,097	218,619
Lyon	7,357	397,278	509	40,720	9,525	257,175
Marion	3,874	209,196	304	24,320	2,600	70,200
Marshall	6,277	338,958	569	45,520	8,270	223,290
McPherson	6,020	325,080	964	77,120	3,633	98,091
Miami	8,350	450,900	1,044	83,520	7,729	208,683
Mitchell	5,178	279,612	570	45,600	3,323	89,721
Montgomery	5,031	271,674	1,138	91,040	4,741	128,007
Morris	3,454	186,516	404	32,320	3,734	100,818
Nemaha	6,156	332,424	399	31,920	10,724	289,548
Neosho	5,580	301,320	1,119	89,520	5,332	143,964
Norton	1,223	66,042	160	12,800	994	26,838
Osage	5,771	311,634	528	42,240	7,352	198,504
Osborne	4,256	229,824	671	53,680	3,127	84,429
Ottawa	4,264	230,256	587	46,960	2,877	77,679
Pawnee	1,682	90,828	602	48,160	1,227	33,129
Phillips	2,910	157,140	399	31,920	2,179	58,833
Pottawatomie	7,942	428,868	544	43,520	11,070	298,890
Pratt	337	18,198	164	13,120	191	5,157
Reno	4,063	219,402	1,334	106,720	2,903	78,381
Republic	5,868	316,872	544	43,520	3,788	102,276
Rice	2,648	142,992	612	48,960	1,677	45,179
Riley	4,662	251,748	511	40,880	6,437	173,799
Rooks	1,348	72,792	260	20,800	975	26,325
Rush	1,627	87,858	324	25,920	1,051	28,377
Russell	1,451	78,354	245	19,600	1,351	36,477
Saline	4,938	266,652	724	57,920	3,150	85,050
Sedgwick	6,188	334,152	1,710	136,800	3,971	107,217
Shawnee	7,212	389,448	735	58,800	8,916	240,732
Smith	5,233	282,582	622	49,760	3,271	88,317
Sumner	5,864	316,656	1,778	142,240	3,615	97,605
Wabaunsee	4,687	253,098	288	23,040	6,481	174,987
Washington	5,311	286,794	495	39,600	5,018	135,486
Wilson	4,806	259,524	858	68,640	5,698	153,846
Woodson	2,896	156,384	351	28,080	4,087	110,349
Wyandotte	2,703	145,962	729	58,320	2,321	62,667
Total	324,766	$17,537,364	51,981	$4,158,480	322,020	$8,694,540

SUMMARY BY COUNTIES—Concluded.

Showing number and value of live stock for 1879.

COUNTIES.	OTHER CATTLE.		SHEEP.		SWINE.		TOTAL VALUE.
	Number.	*Value.*	*Number.*	*Value.*	*Number.*	*Value.*	
Allen	10,982	$263,568	2,819	$9,866 50	15,013	$90,078	$794,876 50
Anderson	9,763	234,312	3,297	11,539 50	13,963	83,778	649,918 50
Atchison	13,684	328,416	3,026	10,591 00	21,152	126,912	988,723 00
Barbour	7,100	170,400	5,855	20,492 50	255	1,530	298,124 50
Barton	4,445	106,680	3,204	11,214 00	8,211	49,266	518,096 00
Bourbon	15,874	380,976	4,324	15,134 00	18,279	109,674	1,169,212 00
Brown	15,456	370,944	1,173	4,105 50	38,898	233,388	1,262,858 50
Butler	12,033	288,792	8,362	29,267 00	35,339	212,034	1,172,837 00
Chautauqua	14,054	337,296	3,866	13,531 00	14,238	85,428	866,373 00
Chase	11,099	266,376	2,251	7,878 50	8,243	49,458	537,291 50
Cherokee	7,228	173,472	4,794	16,779 00	24,017	144,102	881,069 00
Clay	5,138	123,312	2,483	8,690 50	21,106	126,636	662,738 50
Cloud	6,115	146,760	7,990	27,965 00	35,011	210,066	848,058 00
Coffey	14,614	350,736	12,583	44,040 50	21,706	130,236	986,377 50
Cowley	9,331	223,944	12,558	43,953 00	34,931	209,586	1,086,904 00
Crawford	8,813	211,512	5,196	18,186 00	27,403	164,418	938,718 00
Davis	6,247	149,928	336	1,176 00	8,073	48,438	445,241 00
Dickinson	6,090	146,160	5,782	20,237 00	23,728	142,368	774,683 00
Doniphan	7,908	189,792	832	2,912 00	27,052	162,312	792,633 00
Douglas	13,293	319,032	1,594	5,579 00	22,460	134,760	1,070,085 00
Edwards	867	20,808	2,536	8,876 00	682	4,092	107,521 00
Elk	8,999	215,976	17,057	59,699 50	13,037	78,222	698,624 50
Ellis	6,700	160,800	2,625	9,187 50	1,200	7,200	328,248 50
Ellsworth	4,903	117,672	6,547	22,914 50	5,446	32,676	367,086 50
Ford	588	14,112	412	1,442 00	293	1,758	72,095 00
Franklin	14,794	355,056	4,503	15,760 50	25,491	152,946	1,081,296 50
Greenwood	20,995	503,880	4,716	16,506 00	13,834	83,004	1,102,416 00
Harper	516	12,384	597	2,089 50	556	3,336	60,143 50
Harvey	4,195	100,680	3,654	12,789 00	13,251	79,506	489,788 00
Jackson	16,097	386,328	6,902	24,157 00	20,141	120,846	1,071,039 00
Jefferson	16,841	404,184	2,294	8,029 00	31,475	188,850	1,248,133 00
Jewell	7,008	168,192	1,271	4,448 50	36,339	218,034	932,688 50
Johnson	12,380	297,120	1,456	5,096 00	27,400	164,400	1,105,276 00
Kingman	504	12,096	596	2,086 00	919	5,514	76,633 00
Labette	8,663	207,912	3,836	13,426 00	26,501	159,006	980,044 00
Leavenworth	12,270	294,480	2,767	9,684 50	22,314	133,884	1,058,535 50
Lincoln	4,102	98,448	2,120	7,420 00	6,881	41,286	422,076 00
Linn	18,116	434,784	6,008	21,028 00	28,336	170,016	1,307,419 00
Lyon	22,106	530,544	17,756	62,146 00	20,908	125,448	1,413,311 00
Marion	4,648	111,552	2,685	9,397 50	14,998	89,988	514,653 50
Marshall	14,868	356,832	2,438	8,533 00	30,452	182,712	1,155,845 00
McPherson	5,221	125,304	2,046	7,161 00	16,699	100,194	732,950 00
Miami	19,879	477,096	2,227	7,794 50	37,556	225,336	1,453,329 50
Mitchell	5,910	141,840	9,350	32,725 00	25,011	150,066	739,564 00
Montgomery	7,665	183,960	2,510	8,785 00	28,021	168,126	851,592 00
Morris	6,989	167,736	4,972	17,402 00	13,277	79,662	584,454 00
Nemaha	19,407	465,768	818	2,863 00	26,847	161,082	1,283,605 00
Neosho	9,280	222,720	3,513	12,295 50	22,939	137,634	907,453 50
Norton	1,505	36,120	260	910 00	1,626	9,756	152,466 00
Osage	15,772	378,528	2,804	9,814 00	19,526	117,156	1,057,876 00
Osborne	5,961	143,064	11,953	41,835 50	10,041	60,246	613,078 50
Ottawa	5,875	141,000	7,383	25,840 50	14,002	84,012	605,747 50
Pawnee	1,784	42,816	5,381	18,833 50	2,188	13,128	246,894 50
Phillips	2,783	66,792	2,450	8,575 00	4,812	28,872	352,132 00
Pottawatomie	22,992	551,808	8,410	29,435 00	26,980	161,880	1,514,401 00
Pratt	356	8,544	3,955	13,842 50	263	1,578	60,439 50
Reno	4,793	114,032	1,781	6,233 50	11,335	68,010	592,778 50
Republic	6,390	153,360	4,454	15,589 00	38,142	228,852	860,469 00
Rice	2,131	51,144	1,785	6,247 50	7,541	45,246	339,768 50
Riley	13,812	331,488	2,207	7,724 50	14,289	85,734	891,373 50
Rooks	2,626	63,024	1,218	4,263 00	1,168	7,008	194,212 00
Rush	1,583	37,992	56	196 00	1,351	8,106	188,449 00
Russell	3,417	82,008	12,035	42,122 50	2,171	13,026	271,587 50
Saline	5,445	130,680	3,902	13,657 00	13,934	83,604	637,563 00
Sedgwick	6,627	159,048	2,549	8,921 50	26,491	158,946	905,084 50
Shawnee	19,192	460,608	4,481	15,683 50	27,998	167,988	1,333,259 50
Smith	4,576	109,824	2,952	10,332 00	16,863	101,178	641,993 00
Sumner	5,973	143,352	2,081	7,283 50	19,454	116,724	823,860 50
Wabaunsee	12,719	305,256	3,076	10,766 00	10,480	62,880	830,027 00
Washington	8,730	210,520	3,606	12,621 00	23,316	139,896	824,917 00
Wilson	10,974	263,376	3,755	13,142 50	20,312	121,872	880,400 50
Woodson	11,432	274,368	8,189	28,661 50	6,997	41,982	639,824 50
Wyandotte	3,217	77,208	602	2,107 00	13,332	79,992	426,256 00
Total	654,443	$15,706,632	311,862	$1,091,517 00	1,264,494	$7,586,964	$54,775,497 00

LIVE STOCK.

STATE SUMMARY.

YEARS.	HORSES.		MULES AND ASSES.		MILCH COWS.	
	No.	*Value.*	*No.*	*Value.*	*No.*	*Value.*
Total in 1878	274,450	$16,467,000	40,564	$3,042,300	286,241	$7,442,266
Total in 1879	324,766	17,537,364	51,981	4,158,480	322,020	8,964,540
Increase	50,316	$1,070,364	11,417	$1,116,180	35,779	$1,522,274

YEARS.	OTHER CATTLE.		SHEEP.		SWINE.	
	No.	*Value.*	*No.*	*Value.*	*No.*	*Value.*
Total in 1878	586,002	$12,423,242	243,760	$731,280	1,195,044	$6,094,724
Total in 1879	654,443	15,706,632	311,862	1,091,517	1,264,494	7,586,964
Increase	68,441	$3,283,390	68,102	$360,237	69,450	$1,492,240

VALUATIONS AND SCHOOL STATISTICS.

VALUATION OF FARM PRODUCTS, ASSESSED VALUATION OF PROPERTY, AND SCHOOL STATISTICS, &c., FOR 1879.

The following summary by counties, of the valuation of farm products, increase in value of farm animals, products of market gardens, apiarian and horticultural products, assessed valuation of property, real valuation, increase in cultivated area, number and value of farm dwellings erected during the year, the number of school districts, school houses, and number of teachers employed, for 1879, show a most encouraging progress throughout the State. This compilation gives concisely the information most desired by those seeking new homes in Kansas, and will materially aid investors in examining the comparative resources of the counties.

This department acknowledges its indebtedness for statistics of assessed and real valuation, and the tax on each $100 of assessed valuation, to the State Auditor, Hon. P. I. Bonebrake; and for school statistics to the Superintendent of Public Instruction, Hon. A. B. Lemmon.

ALLEN COUNTY.	*1878.*	*1879.*
Field products	$520,063 45	$657,747 45
Increase in the total value of farm animals	134,739 90	43,174 10
Products of live stock	144,770 50	160,463 85
Products of market gardens	2,010 70	2,652 00
Apiarian products	531 65	1,031 80
Horticultural products	56,489 42	5,263 28
Total	$858,602 63	$870,332 48
Increase during the year		$11,729 85

Total valuation of products of 1879, $870,332.48; assessed valuation of property, March 1, 1879, $1,910,752.45; real valuation of assessed property, $3,184,587.42; total valuation of all property, $4,054,919.90. Value per capita of products of 1879, $86.04—; real valuation per capita of assessed property of 1879, $314.81—; valuation per capita of products of 1879, together with the real valuation of assessed property, $400.84+. Increase in cultivated area for year ending March 1, 1879, 9,249.27; number of farm dwellings erected during year ending March 1, 1879, 93; value of farm dwellings erected during year ending March 1, 1870, $13,451. Tax on each $100 of assessed valuation, $3.89+. Number of school districts, 63; number of school houses, 59; value of school buildings and grounds, $36,340; number of teachers employed during the year, 89; average wages paid, $29.88; total school expenses, $22,559.28.

ANDERSON COUNTY.	*1878.*	*1879.*
Field products	$348,076 43	$515,268 01
Increase in total value of farm animals	95,710 20	21,181 30
Products of live stock	151,323 32	149,014 49
Products of market gardens	3,404 75	2,324 50
Apiarian products	524 70	769 20
Horticultural products	57,702 42	4,422 45
Total	$656,741 82	$692,979 95
Increase during the year		$36,238 13

Total valuation of products of 1879, $692,979.95; assessed valuation of property, March 1, 1879, $1,895,314.87; real valuation of assessed property, $3,158,858.12; total valuation of all property, $3,851,838.07. Value per capita of products of 1879, $104.74+;

real valuation per capita of assessed property of 1879, $477.46—; valuation per capita of products of 1879, together with the real valuation of assessed property, $582.20+. Increase in cultivated area for year ending March 1, 1879, 2,970.49; number of farm dwellings erected during year ending March 1, 1879, 70; value of farm dwellings erected during year ending March 1, 1879, $8,985. Tax on each $100 of assessed valuation, $3.03+. Number of school districts, 69; number of school houses, 68; value of school buildings and grounds, $66,079; number of teachers employed during the year, 99; average wages paid, $26.58; total school expenses, $18,286.68.

ATCHISON COUNTY.	*1878.*	*1879.*
Field products	$793,381 99	$1,273,625 72
Increase in total value of farm animals	.....	219,622 20
Products of live stock	285,833 10	304,520 90
Products of market gardens	9,948 00	11,561 60
Apiarian products	3,900 20	4,352 95
Horticultural products	77,576 18	23,407 26
Total	$1,170,639 46	$1,837,390 08
Increase during the year		$666,750 62

Total valuation of products of 1879, $1,837,390.08; assessed valuation of property, March 1, 1879, $4,516,356.07; real valuation of assessed property, $7,527,260.12; total valuation of all property, $9,364,650.20. Value per capita of products of 1879, $84.67+; real valuation per capita of assessed property of 1879, $346.88—; valuation per capita of products of 1879, together with the real valuation of assessed property, $431.55+. Increase in cultivated area for year ending March 1, 1879, 25,652; number of farm dwellings erected during year ending March 1, 1879, 63; value of farm dwellings erected during the year ending March 1, 1879, $24,475. Tax on each $100 of assessed valuation, $3.58+. Number of school districts, 68; number of school houses, 72; value of school buildings and grounds, $98,475; number of teachers employed, 99; average wages paid, $36; total school expenses, $45,762.31.

BARBOUR COUNTY.	*1878.*	*1879.*
Field products	$73,830 30	$78,804 85
Increase in total value of farm animals	81,613 30	99,790 20
Products of live stock	2,243 95	3,654 62
Products of market gardens	25 55	413 90
Apiarian products	.....	3 00
Horticultural products	20 88	100 00
Total	$157,733 98	$182,766 57
Increase during the year		$25,032 59

Total valuation of products of 1879, $182,766.57; assessed valuation of property, March 1, 1879, $204,415.60; real valuation of assessed property, $340,692.67; total valuation of all property, $523,459.24. Value per capita of products of 1879, $90.65+; real valuation per capita of assessed property of 1879, $168.99+; valuation per capita of products of 1879, together with the real valuation of assessed property, $259.65+. Increase in cultivated area for year ending March 1, 1879, $3,536.25; number of farm dwellings erected during year ending March 1, 1879, 90; value of farm dwellings erected during year ending March 1, 1879, $7,135. Tax on each $100 of assessed valuation, $3.33—. Number of school districts, 20; number of school houses, 4; value of school buildings and grounds, $1,650; number of teachers employed during the year, 18; average wages paid, $22.17; total school expenses, $1,834.22.

BARTON COUNTY.	*1878.*	*1879.*
Field products	$1,002,166 05	$778,686 83
Increase in total value of farm animals	155,332 70	161,906 30
Products of live stock	37,730 36	69,620 23
Products of market gardens	2,753 00	5,375 00
Apiarian products	10 00	3 60
Horticultural products	281 23	12 00
Total	$1,198,273 34	$1,015,603 96
Decrease during the year		$182,669 38

Total valuation of products of 1879, $1,015,603.96; assessed valuation of property, March 1, 1879, $1,182,337.45; real valuation of assessed property, $1,970,562.42; total valuation of all property, $2,986,166.38. Value per capita of products of 1879, $82.35—; real valuation per capita of assessed property of 1879, $159.78—; valuation per capita of products of 1879, together with the real valuation of assessed property, $242.13—. Increase in cultivated area for year ending March 1, 1879, 54,754.50; number of farm dwellings erected during year ending March 1, 1879, 669; value of farm dwellings erected during year ending March 1, 1879, $90,211. Tax on each $100 of assessed valuation, $4.84+. Number of school districts, 74; number of school houses, 54; value of school buildings and grounds, $25,000; number of teachers employed during the year, 77; average wages paid, $28; total school expenses, $15,817.87.

BOURBON COUNTY.	*1878.*	*1879.*
Field products	$933,915 01	$1,124,705 39
Increase in total value of farm animals	79,888 10	42,640 90
Products of live stock	276,742 29	252,936 93
Products of market gardens	7,905 36	6,257 00
Apiarian products	2,572 60	5,080,45
Horticultural products	118,107 56	15,902 34
Total	$1,419,130 92	$1,477,523 01
Increase during the year		$28,392 09

Total valuation of products of 1879, $1,447,523.01; assessed valuation of property, March 1, 1879, $3,510,045.93; real valuation of assessed property, $5,850,076.55; total valuation of all property, $7,297,599.56. Value per capita of products of 1879, $79.06—; real valuation per capita of assessed property of 1879, $319.50+; valuation per capita of products of 1879, together with the real valuation of assessed property, $398.56—. Increase in cultivated area for year ending March 1, 1879, 3,666.44; number of farm dwellings erected during year ending March 1, 1879, 89; value of farm dwellings erected during year ending March 1, 1879, $17,079. Tax on each $100 of assessed valuation, $3.15+. Number of school districts, 92; number of school houses, 92; value of school buildings and grounds, $92,482; number of teachers employed during the year, 136; average wages paid, $29.77; total school expenses, $32,382.85.

BROWN COUNTY.	*1878.*	*1879.*
Field products	$1,084,985 80	$1,698,132 81
Increase in total value of farm animals	101,495 50	150,597 00
Products of live stock	373,321 99	424,590 60
Products of market gardens	3,594 70	1,958 70
Apiarian products	1,220 31	3,022 40
Horticultural products	83,901 16	9,891 65
Total	$1,648,519 45	$2,289,193 26
Increase during the year		$640,673 81

Total valuation of products of 1879, $2,289,193.26; assessed valuation of property, March 1, 1879, $3,153,974.26; real valuation of assessed property, $5,256,623.77; total valuation of all property, $7,545,817.03. Value per capita of products of 1879, $212.16+; real valuation per capita of assessed property of 1879, $487.18—; valuation per capita of products of 1879, together with the real valuation of assessed property, $699.33+. Decrease in cultivated area for year ending March 1, 1879, 2,213.73; number of farm dwellings erected during year ending March 1, 1879, 63; value of farm dwellings erected during year ending March 1, 1879, $15,135. Tax on each $100 of assessed valuation, $2.76—. Number of school districts, 70; number of school houses, 68; value of school buildings and grounds, $66,680; number of teachers employed during the year, 101; average wages paid, $34.19; total school expenses, $38,185.96.

BUTLER COUNTY.	1878.	1879.
Field products	$1,194,957 74	$1,241,940 13
Increase in total value of farm animals	194,790 80	171,896 70
Products of live stock	218,465 81	230,940 34
Products of market gardens	4,745 13	4,691 95
Horticultural products	60,147 77	3,381 00
Total	$1,673,107 25	$1,652,850 12
Increase during the year		$20,257 13

Total valuation of products of 1879, $1,652,850.12; assessed valuation of property, March 1, 1879, $2,651,022.17; real valuation of assessed property, $4,418,370.28; total valuation of all property, $6,071,220.40. Value per capita of products of 1879, $97.19+; real valuation per capita of assessed property of 1879, $259.81+; valuation per capita of products of 1879, together with the real valuation of assessed property, $357+. Increase in cultivated area for year ending March 1, 1879, 38,433.58; number of farm dwellings erected during year ending March 1, 1879, 370; value of farm dwellings erected during year ending March 1, 1879, $65,273. Tax on each $100 of assessed valuation, $3.72+. Number of school districts, 125; number of school houses, 125; value of school buildings and grounds, $79,079; number of teachers employed during the year, 161; average wages paid, $29.43; total school expenses, $34,962.76.

CHAUTAUQUA COUNTY.	1878.	1879.
Field products	$413,627 21	$538,589 02
Increase in total value of farm animals	65,775 60	115,310 40
Products of live stock	119,224 84	167,840 39
Products of market gardens	1,209 50	2,311 10
Apiarian products	101 60	136 00
Horticultural products	32,878 29	7,999 31
Total	$632,817 04	$832,186 22
Increase during the year		$199,369 18

Total valuation of products of 1879, $832,186.22; assessed valuation of property, March 1, 1879, $956,964.58; real valuation of assessed property, $1,594,940.97; total valuation of all property, $2,427,127.19. Value per capita of products of 1879, $78.98—; real valuation per capita of assessed property of 1879, $151.37—; valuation per capita of products of 1879, together with the real valuation of assessed property, $230.34+. Increase in cultivated area for year ending March 1, 1879, 8,240.70; number of farm dwellings erected during year ending March 1, 1879, 58; value of farm dwellings erected during year ending March 1, 1879, $6,920. Tax on each $100 of assessed valuation, $4.26+. Number of school districts, 86; number of school houses, 83; value of school buildings and grounds, $40,485; number of teachers employed during the year, 104; average wages paid, $27.17; total school expenses, $12,120.68.

CHASE COUNTY.	1878.	1879.
Field products	$254,791 95	$265,592 82
Increase in total value of farm animals	57,762 40	75,340 10
Products of live stock	134,710 75	178,115 32
Products of market gardens	1,159 50	951 50
Apiarian products	109 00	426 25
Horticultural products	12,050 56	756 28
Total	$460,584 16	$521,182 27
Increase during the year		$60,598 11

Total valuation of products of 1879, $521,182.27; assessed valuation of property, March 1, 1879, $1,670,229.78; real valuation of assessed property, $2,783,716.30; total valuation of all property, $3,304,898.57. Value per capita of products of 1879, $109.89—; real valuation per capita of assessed property of 1879, $586.70—; valuation per capita of products of 1879, together with the real valuation of assessed property, $696.79+. Increase in cultivated area for year ending March 1, 1879, 1,834.87; number of farm dwellings erected during year ending March 1, 1879, 98; value of farm dwellings erected

during year ending March 1, 1879, $24,295. Tax on each $100 of assessed valuation, $2.85. Number of school districts, 40; number of school houses, 41; value of school buildings and grounds, $23,350; number of teachers employed during the year, 40; average wages paid, $31.61; total school expenses, $12,945.75.

CHEROKEE COUNTY.	*1878.*	*1879.*
Field products	$966,634 29	$1,121,210 60
Increase in total value of farm animals	248,132 87	25,293 70
Products of live stock	162,283 84	132,285 18
Products of market gardens	11,494 35	10,045 50
Apiarian products	4,185 80	7,836 00
Horticultural products	99,929 51	13,123 28
Total	$1,492,660 59	$1,310,794 26
Decrease during the year		$181,866 33

Total valuation of products of 1879, $1,310,794.26; assessed valuation of property, March 1, 1879, $2,194,966.00; real valuation of assessed property, $3,658,276.67; total valuation of all property, $4,969,070.93. Value per capita of products of 1879, $70.72—; real valuation per capita of assessed property of 1879, $197.37+; valuation per capita of products of 1879, together with the real valuation of assessed property, $268.09+. Increase in cultivated area for year ending March 1, 1879, 6,445.49; number of farm dwellings erected during year ending March 1, 1879, 114; value of farm dwellings erected during year ending March 1, 1879, $15,922. Tax on each $100 of assessed valuation, $4.13—. Number of school districts, 96; number of school houses, 84; value of school buildings and grounds, $71,842; number of teachers employed during the year, —;* average wages paid, $29.00; total school expenses, $20,718.27.

CLAY COUNTY.	*1878.*	*1879.*
Field products	$815,751 66	$1,026,242 89
Increase in total value of farm animals	93,673 60	104,930 40
Products of live stock	77,401 90	123,861 36
Products of market gardens	1,270 70	1,348 25
Apiarian products	.....	72 50
Horticultural products	14,741 92	413 12
Total	$1,003,839 78	$1,256,868 52
Increase during the year		$253,028 74

Total valuation of products of 1879, $1,256,868.52; assessed valuation of property, March 1, 1879, $1,452,580; real valuation of assessed property, $2,420,966.67; total valuation of all property, $3,677,835.19. Value per capita of products of 1879, $117.93—; real valuation per capita of assessed property of 1879, $227.15+; valuation per capita of products of 1879, together with the real valuation of assessed property, $345.08—. Increase in cultivated area for year ending March 1, 2879, 29,177.32; number of farm dwellings erected during year ending March 1, 1879, 250; value of farm dwellings erected during year ending March 1, 1879, $30,627. Tax on each $100 of assessed valuation, $3.39+. Number of school districts, 95; number of school houses, 80; value of school buildings and grounds, $40,451; number of teachers employed during the year, 89; average wages paid, $24.90; total school expenses, $22,150.86.

CLOUD COUNTY.	*1878.*	*1879.*
Field products	$665,592 74	$837,509 88
Increase in total value of farm animals	181,884 20	174,418 20
Products of live stock	126,409 21	197,431 32
Products of market gardens	1,493 00	2,982 00
Apiarian products	.....	2 50
Horticultural products	18,753 83	1,600 00
Total	$994,132 28	$1,213,944 50
Increase during the year		$219,812 22

*No returns.

Total valuation of products of 1879, $1,213,944.50; assessed valuation of property, March 1, 1879, $1,633,162,17; real valuation of assessed property, $2,721,936.95; total valuation of all property, $3,935,881.45. Value per capita of products of 1879, $95.92—; real valuation per capita of assessed property of 1879, $215.07+; valuation per capita of products of 1879, together with the real valuation of assessed property, $310.99—. Increase in cultivated area for the year ending March 1, 1879, 21,651.62; number of farm dwellings erected during year ending March 1, 1879, 379; value of farm dwellings erected during year ending March 1, 1879, $107,682. Tax on each $100 of assessed valuation, $3.931. Number of school districts, 96; number of school houses, 72; value of school buildings and grounds, $45,423; number of teachers employed during the year, 130; average wages paid, $22.17; total school expenses, $15,963.44.

COFFEY COUNTY.	*1878.*	*1879.*
Farm products	$480,741 80	$584,789 97
Increase in total value of farm animals	120,246 90	161,523 66
Products of live stock	176,034 47	340,238 84
Products of market gardens	2,241 25	4,763 00
Apiarian products	670 75	1,739 20
Horticultural products	52,197 63	5,159 67
Total	$832,132 80	$1,098,214 28
Increase during the year		$266,081 48

Total valuation of products of 1879, $1,098,214.28; assessed valuation of property, March 1, 1879, $2,328,606.04; real valuation of assessed property, $3,881,010.07; total valuation of all property, $4,979,224.35. Value per capita of products of 1879, $108.98+; real valuation per capita of assessed property of 1879, $385.14—; valuation per capita of products of 1879, together with the real valuation of assessed property, $494.12—. Increase in cultivated area for year ending March 1, 1879, 14,435.82; number of farm dwellings erected during year ending March 1, 1879, 92; value of farm dwellings erected during year ending March 1, 1879, $48.319. Tax on each $100 of assessed valuation, $3.56+. Number of school districts, 71; number of school houses, 69; value of school buildings and grounds, $66,957; number of teachers employed during the year, 117; average wages paid, $29.85; total school expenses, $24,446.02.

COWLEY COUNTY.	*1878.*	*1879.*
Field products	$1,153,482 24	$1,538,401 60
Increase in total value of farm animals	103,255 00	268,943 00
Products of live stock	115,780 54	187,428 50
Products of market gardens	3,293 25	4,828 75
Apiarian products	.....	258 90
Horticultural products	50,138 55	3,511 34
Total	$1,425,949 58	$2,003,372 09
Increase during the year		$577,422 51

Total valuation of products of 1879, $2,003,372.09; assessed valuation of property, March 1, 1879, $2,159,147; real valuation of assessed property, $3,598,578.33; total valuation of all property, $5,601,950.42. Value per capita of products of 1879, $110.34—; real valuation per capita of assessed property of 1879, $198.19+; valuation per capita of products of 1879, together with the real valuation of assessed property, $308.53—. Increase in cultivated area for year ending March 1, 1879, 19,819.58; number of farm dwellings erected during year ending March 1, 1879, 331; value of farm dwellings erected during year ending March 1, 1879, $133.368. Tax on each $100 of assessed valuation, $3.20. Number of school districts, 122; number of school houses, 107; value of school buildings and grounds, $62,251; number of teachers employed during the year, 137; average wages paid, $26.52; total school expenses, $25,614.47.

CRAWFORD COUNTY.	*1878.*	*1879.*
Field products	$725,914 28	$1,190,894 42
Increase in total value of farm animals	93,774 60	154,314 90
Products of live stock	172,831 13	189,409 29
Products of market gardens	2,906 10	10,178 00
Apiarian products	1,890 00	4,187 35
Horticultural products	55,657 40	9,144 07
Total	$1,053,973 56	$1,558,128 02
Increase during the year		$504,154 46

Total valuation of products of 1879, $1,558,128.02; assessed valuation of property, March 1, 1879, $2,181,694.96; real valuation of assessed property, $3,636,158.27; total valuation of all property, $5,194,286.29. Value per capita of products of 1879, $106.56+; real valuation per capita of assessed property of 1879, $248.68—; valuation per capita of products of 1879, together with the real valuation of assessed property, $355.24—. Increase in cultivated area for year ending March 1, 1879, 22,409.86; number of farm dwellings erected during year ending March 1, 1879, 70; value of farm dwellings erected during year ending March 1, 1879, $10,481. Tax on each $100 of assessed valuation, $3.23. Number of school districts, 103; number of school houses, 104; value of school buildings and grounds, $60,515; number of teachers employed during the year, 144; average wages paid, $28.40; total school expenses, $29,994.63.

DAVIS COUNTY.	*1878.*	*1879.*
Field products	$347,427 58	$307,409 74
Increase in total value of farm animals	20,146 80	87,406 70
Products of live stock	88,444 79	77,545 86
Products of market gardens	1,677 00	2,631 00
Apiarian products	130 00	615 20
Horticultural products	15,393 36	1,552 47
Total	$473,219 53	$477,160 97
Increase during the year		$3,941 44

Total valuation of products of 1879, $477,160.97; assessed valuation of property, March 1, 1879, $1,418,983.25; real valuation of assessed property, $2,364,972.08; total valuation of all property, $2,842,133.05. Value per capita of products of 1879, $78.39+; real valuation per capita of assessed property of 1879, $388.53—; valuation per capita of products of 1879, together with the real valuation of assessed property, $466.92—. Increase in cultivated area for year ending March 1, 1879, 12,903. Number of farm dwellings erected during year ending March 1, 1879, 80; value of farm dwellings erected during year ending March 1, 1879, $18,375. Tax on each $100 of assessed valuation, $3.53—. Number of school districts, 40; number of school houses, 41; value of school buildings and grounds, $35,860; number of teachers employed during the year, 56; average wages paid, $32.14; total school expenses, $14,692.38.

DICKINSON COUNTY.	*1878.*	*1879.*
Field products	$1,520,673 72	$1,029,111 58
Increase in total value of farm animals	52,413 20	130,173 30
Products of live stock	105,101 40	211,370 67
Products of market gardens	1,777 00	3,978 00
Apiarian products	10 00	76 00
Horticultural products	33,207 18	2,420 59
Total	$1,713,182 50	$1,377,130 14
Decrease during the year		$336,052 36

Total valuation of products of 1879, $1,377,130.14; assessed valuation of property, March 1, 1879, $2,738,423.45; real valuation of assessed property, $4,564,039.08; total valuation of all property, $5,941,169.22. Value per capita of products of 1879, $105.89+; real valuation per capita of assessed property of 1879, $350.94+; valuation per capita of products of 1879, together with the real valuation of assessed property, $456.84—. Increase in cultivated area for year ending March 1, 1879, 19,481.55; number of farm dwellings erected during year ending March 1, 1879, 402; value of farm dwellings erected

during year ending March 1, 1879, $144,449. Tax on each $100 of assessed valuation, $3.22. Number of school districts, 100; number of school houses, 97; value of school buildings and grounds, $88,830; number of teachers employed during the year, 118; average wages paid, $31.64; total school expenses, $31,567.65.

DONIPHAN COUNTY.	*1878.*	*1879.*
Field products	$1,070,701 27	$1,697,763 80
Increase in total value of farm animals	35,121 00	.....
Products of live stock	235,821 73	266,108 69
Products of market gardens	1,475 00	969 00
Apiarian products	4,303 60	5,891 90
Horticultural products	71,323 43	42,950 33
Total	$1,418,746 03	$2,013,683 72
Increase during the year		$594,937 69

Total valuation of products of 1879, $2,013,683.72; assessed valuation of property, March 1, 1879, $3,058,558.51; real valuation of assessed property, $5,097,597.52; total valuation of all property, $7,111,281.24. Value per capita of products of 1879, $130.26—; real valuation per capita of assessed property of 1879, $329.75+; valuation per capita of products of 1879, together with the real valuation of assessed property, $460.01—. Increase in cultivated area for year ending March 1, 1879, 9,261; number of farm dwellings erected during year ending March 1, 1879, 36; value of farm dwellings erected during year ending March 1, 1879, $14,055. Tax on each $100 of assessed valuation, $2.90. Number of school districts, 67; number of school houses, 73; value of school buildings and grounds, $89,400; number of teachers employed during the year, 104; average wages paid, $33.72; total school expenses, $32,845.23.

DOUGLAS COUNTY.	*1878.*	*1879.*
Field products	$924,526 31	$1,163,700 13
Increase in total value of farm animals	64,122 20	6,928 80
Products of live stock	300,682 08	196,655 68
Products of market gardens	13,356 00	10,887 00
Apiarian products	2,335 30	3,716 30
Horticultural products	122,032 30	40,892 39
Total	$1,427,054 19	$1,422,180 30
Decrease during the year		$4,873 89

Total valuation of products of 1879, $1,422,180.30; assessed valuation of property, March 1, 1879, $4,856,380.07; real valuation of assessed property, $8,093,966.78; total valuation of all property, $9,516,147.08. Value per capita of products of 1879, $69.30—; real valuation per capita of assessed property of 1879, $394.25+; valuation per capita of products of 1879, together with the real valuation of assessed property, $463.52+. Increase in cultivated area for year ending March 1, 1879, 5,049.50; number of farm dwellings erected during year ending March 1, 1879, 81; value of farm dwellings erected during year ending March 1, 1879, $26,403. Tax on each $100 of assessed valuation, $3.81—. Number of school districts, 84; number of school houses, 106; value of school buildings and grounds, $182,836; number of teachers employed during the year, 106; average wages paid, $29.49; total school expenses, $46,892.63.

EDWARDS COUNTY.	*1878.*	*1879.*
Field products	$114,831 14	$65,997 86
Increase in total value of farm animals	20,374 10	60,514 40
Products of live stock	5,905 50	6,318 50
Products of market gardens	470 00	844 00
Horticultural products	4 60	19,425 00
Total	$141,585 34	$153,099 76
Increase during the year		$11,514 42

Total valuation of products of 1879, $153,099.76; assessed valuation of property, March 1, 1879, $565,360.77; real valuation of assessed property, $942,267.95; total valuation of all property, $1,095,367.71. Value per capita of products of 1879, $54.66+; real valuation per capita of assessed property of 1879, $336.40+; valuation per capita

of products of 1879, together with the real valuation of assessed property, $391.06+. Increase in cultivated area for year ending March 1, 1879, 33,306.75; number of farm dwellings erected during year ending March 1, 1879, 210; value of farm dwellings erected during year ending March 1, 1879, $40,699. Tax on each $100 of assessed valuation, $3.90—. Number of school districts, 21; number of school houses, 18; value of school buildings and grounds, $14,030; number of teachers employed during the year, 23; average wages paid, $23.18; total school expenses, $11,906.56.

ELK COUNTY.	*1878.*	*1879.*
Field products	$437,534 19	$503,966 28
Increase in total value of farm animals	110,421 30	65,350 80
Products of live stock	99,226 05	108,593 54
Products of market gardens	2,156 00	938 00
Apiarian products	7 25	105 85
Horticultural products	40,076 64	5,006 00
Total	$689,421 33	$683,960 47
Decrease during the year		$5,460 86

Total valuation of products of 1879, $683,960.47; assessed valuation of property, March 1, 1879, $778,242; real valuation of assessed property, $1,297,070; total valuation of all property, $1,981,030.47. Value per capita of products of 1879, $77.84—; real valuation per capita of assessed property of 1879, $147.61+; valuation per capita of products of 1879, together with the real valuation of assessed property, $225.45—. Increase in cultivated area for year ending March 1, 1879, 7,708.13; number of farm dwellings erected during year ending March 1, 1879, 47; value of farm dwellings erected during year ending March 1, 1879, $5,422. Tax on each $100 of assessed valuation, $4.37—. Number of school districts, 74; number of school houses, 64; value of school buildings and grounds, $27,705; number of teachers employed during the year, 88; average wages paid, $23.41; total school expenses, $10,890.69.

ELLIS COUNTY.	*1878.*	*1879.*
Field products	$120,866 75	$176,820 25
Increase in total value of farm animals	69,679 40	149,049 10
Products of live stock	22,498 86	3,297 30
Products of market gardens	25 00	700 00
Horticultural products	250 36	50 00
Total	$213,320 47	$329,967 65
Increase during the year		$116,647 18

Total valuation of products of 1879, $329,967.65; assessed valuation of property, March 1, 1879, $893,817.38; real valuation of assessed property, $1,489,695.63; total valuation of all property, $1,819,663.28. Value per capita of products of 1879, $62.97—; real valuation per capita of assessed property of 1879, $284.48+; valuation per capita of products of 1879, together with the real valuation of assessed property, $347.26+. Increase in cultivated area for year ending March 1, 1879, 15,644.25; number of farm dwellings erected for year ending March 1, 1879, 246; value of farm dwellings erected during year ending March 1, 1879, $50,146. Tax on each $100 of assessed valuation, $3.50. Number of school districts, 27; number of school houses, 17; value of school buildings and grounds, $17,400; number of teachers employed during the year, 19; average wages paid, $29.31; total school expenses, $10,517.14.

ELLSWORTH COUNTY.	*1878.*	*1879.*
Field products	$391,215 07	$543,142 15
Increase in total value of farm animals	102,758 80	62,565 70
Products of live stock	38,036 44	62,565 74
Products of market gardens	691 00	1,362 50
Horticultural products	925 65	1,300 00
Total	$533,626 96	$685,888 15
Increase during the year		$152,261 19

Total valuation of products of 1879, $685,888.15; assessed valuation of property, March 1, 1879, $910,168.41; real valuation of assessed property, $1,516,947.35; total valuation of all property, $2,202,835.50. Value per capita of products of 1879, $101.75—; real valuation per capita of assessed property of 1879, $225.03+; valuation per capita of products of 1879, together with the real valuation of assessed property, $326.78—. Increase in cultivated area for year ending March 1, 1879, 34,026.44; number of farm dwellings erected during year ending March 1, 1879, 421; value of farm dwellings erected during year ending March 1, 1879, $75,258. Tax on each $100 of assessed valuation, $4.87+. Number of school districts, 56; number of school houses, 38; value of school buildings and grounds, $26,302; number of teachers employed during the year, 53; average wages paid, $23.67; total school expenses, $11,638.38.

FORD COUNTY.	*1878.*	*1879.*
Field products	$31,637 37	$18,664 10
Increase in total value of farm animals	64,170 80	.....
Products of live stock	2,649 60	761 25
Products of market gardens	750 00	.....
Horticultural products	64 71	.....
Total	$99,272 48	$19,425 35
Decrease during the year		$79,847 18

Total valuation of products of 1879, $19,425.35; assessed valuation of property, March 1, 1879, $661,554.13; real valuation of assessed property, $1,102,590.22; total valuation of all property, $1,122,015.57. Value per capita of products of 1879, $6.86—; real valuation per capita of assessed property of 1879, $389.33+; valuation per capita of products of 1879, together with the real valuation of assessed property, $396.19+. Increase in cultivated area for year ending March 1, 1879, 7,361; number of farm dwellings erected during year ending March 1, 1879, 244; value of farm dwellings erected during year ending March 1, 1879, $35,000. Tax on each $100 of assessed valuation, $3.60. Number of school districts, 14; number of school houses, 8; value of school buildings and grounds, $6,395; number of teachers employed during the year, 13; average wages paid, $25.08; total school expenses, $5,880.87.

FRANKLIN COUNTY.	*1878.*	*1879.*
Field products	$873,349 70	$1,088,516 00
Increase in total value of farm animals	160,741 10	119,080 40
Products of live stock	261,491 36	282,590 94
Products of market gardens	1,910 00	5,329 00
Apiarian products	1,988 65	2,998 90
Horticultural products	94,457 10	16,207 75
Total	$1,393,937 91	$1,514,722 99
Increase during the year		$120,785 08

Total valuation of products of 1879, $1,514,722.90; assessed valuation of property, March 1, 1879, $2,972,935.34; real valuation of assessed property, $4,954,892.23; total valuation of all property, $6,469,615.22. Value per capita of products of 1879, $107.63+; real valuation per capita of assessed property of 1879, $352.09—; valuation per capita of products of 1879, together with the real valuation of assessed property, $459.72—. Increase in cultivated area for year ending March 1, 1879, 3,862.72; number of farm dwellings erected during year ending March 1, 1879, 158; value of farm dwellings erected during year ending March 1, 1879, $81,956. Tax on each $100 of assessed valuation, $2.84—. Number of school districts, 83; number of school houses, 84; value of school buildings and grounds, $78,950; number of teachers employed during the year, 114; average wages paid, $28.56; total school expenses, $30,574.12.

GREENWOOD COUNTY.	*1878.*	*1879.*
Field products	$398,128 46	$582,397 21
Increase in total value of farm animals	11,885 00	162,616 00
Products of live stock	236,345 00	285,995 93
Products of market gardens	1,826 10	2,624 00
Apiarian products	268 55	497 85
Horticultural products	36,713 67	4,369 38
Total	$685,166 78	$1,038,500 37
Increase during the year		$353,333 59

Total valuation of products of 1879, $1,038,500.37; assessed valuation of property, March 1, 1879, $2,225,929.16; real valuation of assessed property, $3,709,881.93; total valuation of all property, $4,748,382.30. Value per capita of products of 1879, $126.62—; real valuation per capita of assessed property of 1879, $452.31+; valuation per capita of products of 1879, together with the real valuation of assessed property, $578.93—. Increase in cultivated area for year ending March 1, 1879, 3,610.14; number of farm dwellings erected during year ending March 1, 1879, ——*; value of farm dwellings erected during year ending March 1, 1878, ——.* Tax on each $100 of assessed valuation, $3.62—. Number of school districts, 80; number of school houses, 75; value of school buildings and grounds, $56,535; number of teachers employed during the year, 136; average wages paid, $31.39; total school expenses, $21,275.64.

HARPER COUNTY.	*1879.*
Field products	$86,066 00
Increase in total value of farm animals	60,143 50
Products of live stock	1,545 61
Horticultural products	283 00
Total	$148,038 11

Total valuation of products of 1879, $148,038.11; assessed valuation of property, March 1, 1879, $85,743.65; real valuation of assessed property, $142,906.08; total valuation of all property, $290,944.19. Value per capita of products of 1879, $68.60—; real valuation per capita of assessed property of 1879, $66.02+; valuation per capita of products of 1879, together with the real valuation of assessed property, $134.82+. Increase in cultivated area for year ending March 1, 1879, 9,303.99; number of farm dwellings erected during year ending March 1, 1879, 194; value of farm dwellings erected during year ending March 1, 1879, $18,971. Tax on each $100 of assessed valuation, $2.97+. Number of school districts, 24; number of school houses, 1; value of school buildings and grounds, $100; number of teachers employed during the year, 7; average wages paid, $19.85; total school expenses, $———.*

HARVEY COUNTY.	*1878.*	*1879.*
Field products	$897,493 30	$861,448 46
Increase in total value of farm animals	59,456 20	97,011 80
Products of live stock	58,663 10	71,274 76
Products of market gardens	2,748 00	3,770 00
Apiarian products	25 00	.....
Horticultural products	18,619 93	2,287 00
Total	$1,037,005 53	$1,035,792 02
Decrease during the year		$1,213 51

Total valuation of products of 1879, $1,035,792.02; assessed valuation of property, March 1, 1879, $1,859,726.19; real valuation of assessed property, $3,099,543.65; total valuation of all property, $4,135,335.67. Value per capita of products of 1879, 99.21+; real valuation per capita of assessed property of 1879, $296.89+; valuation per capita of products of 1879, together with the real valuation of assessed property, $396.11—. Decrease in cultivated area for year ending March 1, 1879, 8,806.98; number of farm dwellings erected during year ending March 1, 1879, 306; value of farm dwellings erected during year ending March 1, 1879, $92,007. Tax on each $100 of assessed

* No returns.

valuation, $3.40+. Number of school districts, 67; number of school houses, 62; value of school buildings and grounds, $42,966; number of teachers employed during the year, 83; average wages paid, $32.66; total school expenses, $23,322.19.

JACKSON COUNTY.	*1878.*	*1879.*
Field products	$677,169 86	$916,578 15
Increase in total value of farm animals	154,378 20	122,245 80
Products of live stock	210,812 76	243,105 42
Products of market gardens	1,753 00	1,235 00
Apiarian products	1,056 45	1,690 55
Horticultural products	37,722 69	4,873 64
Total	$1,082,892 96	$1,289,728 56
Increase during the year		$206,835 60

Total valuation of products of 1879, $1,289,728.55; assessed valuation of property, March 1, 1879, $2,277,517.48; real valuation of assessed property, $3,795,862.67; total valuation of all property, $5,085,591.23. Value per capita of products of 1879, $147.70+; real valuation per capita of assessed property of 1879, $437.71—; valuation per capita of products of 1879, together with the real valuation of assessed property, $582.41—. Increase in cultivated area for year ending March 1, 1879, 5,551 36; number of farm dwellings erected during year ending March 1, 1879, 93; value of farm dwellings erected during year ending March 1, 1879, $21,836. Tax on each $100 of assessed valuation, $3.05+. Number of school districts, 69; number of school houses, 69; value of school buildings and grounds, $46,185; number of teachers employed during the year, 96; average wages paid, $32.95; total school expenses, $24,350.16.

JEFFERSON COUNTY.	*1878.*	*1879.*
Field products	$1,100,580 40	$1,322,995 73
Increase in total value of farm animals	113,228 30	119,059 20
Products of live stock	357,287 71	310,013 99
Products of market gardens	3,620 00	5,400 00
Apiarian products	2,989 50	4,451 05
Horticultural products	86,536 10	11,074 00
Total	$1,664,242 01	$1,772,993 97
Increase during the year		$108,751 96

Total valuation of products of 1879, $1,772,993.97; assessed valuation of property, March 1, 1879, $3,185,745.30; real valuation of assessed property, $5,309,575.50; total valuation of all property, $7,082,569.47. Value per capita of products of 1879, $127.81+; real valuation per capita of assessed property of 1879, $382.61+; valuation per capita of products of 1879, together with the real valuation of assessed property, $510 57—. Decrease in cultivated area for year ending March 1, 1879, 6,001.53; number of farm dwellings erected during year ending March 1, 1879, 85; value of farm dwellings erected during year ending March 1, 1879, $21,330. Tax on each $100 of assessed valuation, $3.24—. Number of school districts, 91; number of school houses, 90; value of school buildings and grounds, $87,680; number of teachers employed during the year, 139; average wages paid, $34.97; total school expenses, $34,531.61.

JEWELL COUNTY.	*1878.*	*1879.*
Field products	$785,756 85	$1,045,035 19
Increase in total value of farm animals	153,723 30	179,149 70
Products of live stock	138,900 29	157,029 95
Products of market gardens	2,285 95	2,759 52
Apiarian products	.....	10 20
Horticultural products	8,443 92	539 15
Total	$1,089,110 31	$1,384,523 71
Increase during the year		$295,413 40

Total valuation of products of 1879, $1,384,523.71; assessed valuation of property, March 1, 1879, $1,254,186.35; real valuation of assessed property, $2,090,310.58; total valuation of all property, $3,474,834.29. Value per capita of products of 1879, $97.77+;

real valuation per capita of assessed property of 1879, $147.60+; valuation per capita of products of 1879, together with the real valuation of assessed property, $245.38+. Increase in cultivated area for year ending March 1, 1879, 46,265.19; number of farm dwellings erected during year ending March 1, 1879, 314; value of farm dwellings erected during year ending March 1, 1879, $43,125. Tax on each $100 of assessed valuation, $3.86+. Number of school districts, 141; number of school houses, 74; value of school buildings and grounds, $34,080; number of teachers employed during the year, 132; average wages paid, $20.61; total school expenses, $17,986.71.

JOHNSON COUNTY.	*1878.*	*1879.*
Field products	$1,246,638 95	$1,647,883 24
Increase in total value of farm animals	2,868 50	55,392 50
Products of live stock	342,928 74	393,539 29
Products of market gardens	8,827 00	6,138 25
Apiarian products	3,570 60	3,843 20
Horticultural products	103,780 91	21,361 53
Total	$1,708,614 70	$2,128,158 01
Increase during the year		$419,543 31

Total valuation of products of 1879, $2,128,158.01; assessed valuation of property, March 1, 1879, $3,436,136.90; real valuation of assessed property, $5,726,894.83; total valuation of all property, $7,855.052.84. Value per capita of products of 1879, $132.91+; real valuation per capita of assessed property of 1879, $357.66+; valuation per capita of products of 1879, together with the real valuation of assessed property, $490.73—. Increase in cultivated area for year ending March 1, 1879, 21,942.50; number of farm dwellings erected during year ending March 1, 1879, 83; value of farm dwellings erected during year ending March 1, 1879, $26,840. Tax on each $100 of assessed valuation, $3.39+. Number of school districts, 93; number of school houses, 94; value of school buildings and grounds, $70,234; number of teachers employed during the year 147; average wages paid, $33.14; total school expenses, $35,698.06.

KINGMAN COUNTY.	*1879.*
Field products	$153,555 51
Increase in total value of farm animals	76,633 00
Products of live stock	1,524 47
Products of market gardens	15 00
Horticultural products	100 00
Total	$231,827 98

Total valuation of products of 1879, $231,827.98; assessed valuation of property, March 1, 1879, $118,975.55; real valuation of assessed property, $198,292.58; total valuation of all property, $430,120.56. Value per capita of products of 1879, $89.20—; real valuation per capita of assessed property of 1879, $76.03—; valuation per capita of products of 1879, together with the real valuation of assessed property, $165.49+. Increase in cultivated area for year ending March 1, 1879, 18,856; number of farm dwellings erected during year ending March 1, 1879, 283; value of farm dwellings erected during year ending March 1, 1879, $15,916. Tax on each $100 of assessed valuation, $2.91—. Number of school districts, 20; number of school houses, 4; value of school buildings and grounds, $1,775; number of teachers employed during the year, 8; average wages paid, $17.87; total school expenses, $461.05.

LABETTE COUNTY.	*1878.*	*1879.*
Field products	$1,075,188 77	$1,492,438 46
Increase in the value of farm animals	82,474 30	113,987 20
Products of live stock	169,388 50	174,953 46
Products of market gardens	5,203 20	6,121 00
Apiarian products	1,312 35	2,011 15
Horticultural products	98,174 87	14,661 50
Total	$1,431,741 99	$1,804,172 77
Increase during the year		$372,430 78

Total valuation of products of 1879, $1,804,172.77; assessed valuation of property, March 1, 1879, $2,426,782.19; real valuation of assessed property, $4,044,636.98; total valuation of all property, $5,848,809.75. Value per capita of products of 1879, $99.29—; real valuation per capita of assessed property of 1879, $222.59—; valuation per capita of products of 1879, together with the real valuation of assessed property, $321.88—. Decrease in cultivated area for year ending March 1, 1879, 709.43; number of farm dwellings erected during year ending March 1, 1879, 102; value of farm dwellings erected during year ending March 1, 1879, $15,655. Tax on each $100 of assessed valuation, $4.40. Number of school districts, 97; number of school houses, 96; value of school buildings and grounds, $80,255; number of teachers employed during the year, 140; average wages paid, $25.11; total school expenses, $36,063.95.

LEAVENWORTH COUNTY.	*1878.*	*1879.*
Field products	$1,160,387 25	$1,396,729 40
Increase in total value of farm animals	116,21[illegible] 00	34,392 00
Products of live stock	223,463 47	325,652 90
Products of market gardens	16,019 00	27,249 25
Apiarian products	8,300 35	8,304 45
Horticultural products	110,680 83	31,661 28
Total	$1,635,066 90	$1,823,989 28
Increase during the year		$188,922 38

Total valuation of products of 1879, $1,823,989.28; assessed valuation of property, March 1, 1879, $6,357,465.53; real valuation of assessed property, $10,595,775.88; total valuation of all property, $12,419,765.16. Value per capita of products of 1879, $60.23+; real valuation per capita of assessed property of 1879, $349.89+; valuation per capita of products of 1879, together with the real valuation of assessed property, $410.12+. Decrease in cultivated area for year ending March 1, 1879, 3,212; number of farm dwellings erected during year ending March 1, 1879, 83; value of farm dwellings erected during year ending March 1, 1879, $20,921. Tax on each $100 of assessed valuation, $3.55. Number of school districts, 78; number of school houses, 73; value of school buildings and grounds, $221,571; number of teachers employed during the year, 127; average wages paid, $37.72; total school expenses, $54.552.97.

LINCOLN COUNTY.	*1878.*	*1879.*
Field products	$364,417 19	$466,968 28
Increase in total value of farm animals	4,734 40	125,273 10
Products of live stock	53,644 50	56,867 39
Products of market gardens	648 00	1,113 00
Horticultural products	1,052 91	600 00
Total	$424,497 00	$650,821 77
Increase during the year		$226,324 77

Total valuation of products of 1879, $650,821.77; assessed valuation of property, March 1, 1879, $560,363.47; real valuation of assessed property, $933,939.12; total valuation of all property, $1,584,760.89. Value per capita of products of 1879, $87.38+; real valuation per capita of assessed property of 1879, $125.39+; valuation per capita of products of 1879, together with the real valuation of assessed property, $212.76+. Increase in cultivated area for year ending March 1, 1879, 25,414.37; number of farm dwellings erected during year ending March 1, 1879, 563; value of farm dwellings erected during year ending March 1, 1879, $54,045. Tax on each $100 of assessed valuation, $4.371. Number of school districts, 72; number of school houses, 31; value of school buildings and grounds, $13,355; number of teachers employed during the year, 61; average wages paid, $22.62; total school expenses, $7,724.56.

LINN COUNTY.	*1878.*	*1879.*
Field products	$852,912 56	$1,136,242 03
Increase in total value of farm animals	205,629 80	206,158 20
Products of live stock	265,533 16	306,262 78
Products of market gardens	3,393 00	4,480 00
Apiarian products	899 40	5,760 60
Horticultural products	103,194 60	5,816 19
Total	$1,431,562 52	$1,664,719 80
Increase during the year		$233,157 28

Total valuation of products of 1879, $1,664,719.80; assessed valuation of property, March 1, 1879, $2,602,594.43; real valuation of assessed property, $4,337,657.38; total valuation of all property, $6,002,377.18. Value per capita of products of 1879, $114.13+; real valuation per capita of assessed property of 1879, $297.39—; valuation per capita of products of 1879, together with the real valuation of assessed property, $411.52—. Increase in cultivated area for year ending March 1, 1879, 19,655.01; number of farm dwellings erected during year ending March 1, 1879, 80; value of farm dwellings erected during year ending March 1, 1879, $14,175. Taxes on each $100 of assessed valuation, $2.84+. Number of school districts, 98; number of school houses, 96; value of school houses and grounds, $84,786; number of teachers employed during the year, 151; average wages paid, $30.39; total school expenses, $31,737.09.

LYON COUNTY.	*1878.*	*1879.*
Field products	$753,249 12	$894,698 60
Increase in total value of farm animals	192,130 90	292,690 60
Products of live stock	330,098 64	234,444 30
Products of market gardens	15,398 10	12,620 00
Apiarian products	1,397 60	2,899 80
Horticultural products	61,890 99	7,336 22
Total	$1,354,165 35	$1,444,689 52
Increase during the year		$90,524 17

Total valuation of products of 1879, $1,444,689.52; assessed valuation of property, March 1, 1879, $3,851,218.01; real valuation of assessed property, $6,418,696.68; total valuation of all property, $7,863,386.20. Value per capita of products of 1879, $95.85—; real valuation per capita of assessed property of 1879, $425.84+; valuation per capita of products of 1879, together with the real valuation of assessed property, $521.69—. Increase in cultivated area for year ending March 1, 1879, 7,931.57; number of farm dwellings erected during year ending March 1, 1879, 189; value of farm dwellings erected during year ending March 1, 1879, $48,430. Tax on each $100 of assessed valuation, $2.88+. Number of school districts, 88; number of school houses, 88; value buildings and grounds, $73,953; number of teachers employed during the year, 121; average wages paid, $30.11; total school expenses, $25,736.52.

MARION COUNTY.	*1878.*	*1879.*
Field products	$793,439 17	$845,947 79
Increase in total value of farm animals	78,519 40	79,727 60
Products of live stock	67,562 85	113,509 88
Products of market gardens	2,869 50	3,983 28
Apiarian products	5 00	106 45
Horticultural products	12,092 59	625 00
Total	$954,488 51	$1,043,900 00
Increase during the year		$89,411 49

Total valuation of products of 1879, $1,043,900; assessed valuation of property, March 1, 1879, $1,787,465.83; real valuation of assessed property, $2,979,109.72; total valuation of all property, $4,023,009.72. Value per capita of products of 1879, $102.81—; real valuation per capita of assessed property of 1879, $293.39+; valuation per capita of products of 1879, together with the real valuation of assessed property, $396.20—. Decrease in cultivated area for year ending March 1, 1879, 9,095.69; number of farm

dwellings erected during year ending March 1, 1879, 64; value of farm dwellings erected during year ending March 1, 1879, $20,190. Tax on each $100 of assessed valuation, $8.43+.* Number of school districts, 74; number of school houses, 71; value of school buildings and grounds, $65,212; number of teachers employed during the year, 85; average wages paid, $30; total school expenses, $22,904.66.

MARSHALL COUNTY.	*1878.*	*1879.*
Field products	$781,573 42	$1,154,025 93
Increase in total value of farm animals	238,640 40	177,344 10
Products of live stock	255,922 18	256,997 82
Products of market gardens	2,667 00	3,367 50
Apiarian products	614 50	738 20
Horticultural products	31,609 05	627 38
Total	$1,311,026 55	$1,593,100 93
Increase during the year		$282,074 38

Total valuation of products of 1879, $1,593,100.93; assessed valuation of property, March 1, 1879, $3,011,683.85; real valuation of assessed property, $5,019,473.08; total valuation of all property, $6,612,574.01. Value per capita of products of 1879, $93.05+; real valuation per capita of assessed property of 1879, $293.04—; valuation per capita of products of 1879, together with the real valuation of assessed property, $386.05—. Increase in cultivated area for year ending March 1, 1879, 76,750.25; number of farm dwellings erected during year ending March 1, 1879, 152; value of farm dwellings erected during year ending March 1, 1879, $49,150. Tax on each $100 of assessed valuation, $5.45+. Number of school districts, 100; number of school houses, 75; value of school buildings and grounds, $42,195; number of teachers employed during the year, 104; average wages paid, $31.19; total school expenses, $27,822.55.

M'PHERSON COUNTY.	*1878.*	*1879.*
Field products	$1,970,528 61	$1,796,786 27
Increase in total value of farm animals	98,808 90	131,898 10
Products of live stock	85,887 18	112,125 65
Products of market gardens	1,994 80	1,613 00
Apiarian products	.....	8 50
Horticultural products	13,121 55	14,387 00
Total	$2,170,341 04	$2,056,818 52
Decrease during the year		$113,522 52

Total valuation of products of 1879, $2,056,818.52; assessed valuation of property, March 1, 1879, $1,456,710; real valuation of assessed property, $2,427,850; total valuation of all property, $4,484,668.52. Value per capita of products of 1879, $155.87—; real valuation per capita of assessed property of 1879, $183.98+; valuation per capita of products of 1879, together with the real valuation of assessed property, $339.85+. Increase in cultivated area for year ending March 1, 1879, 28,357.87; number of farm dwellings erected during year ending March 1, 1879, 226; value of farm dwellings erected during year ending March 1, 1879, $29,113. Tax on each $100 of assessed valuation, $2.87. Number of school districts, 93; number of school houses, 76; value of school buildings and grounds, $37,114; number of teachers employed during the year, 99; average wages paid, $27.58; total school expenses, $17,716.13.

MIAMI COUNTY.	*1878.*	*1879.*
Field products	$1,012,535 75	$1,549,585 94
Increase in total value of farm animals	120,099 30	232,783 70
Products of live stock	511,714 44	460,768 80
Products of market gardens	.....	3,022 00
Apiarian products	796 00	3,509 75
Horticultural products	98,992 17	13,803 31
Total	$1,744,137 66	$2,263,473 50
Increase during the year		$519,335 84

*The citizens of Marion county agreed to pay the entire amount voted to the A. T. & S. F. R. R. in two years, instead of issuing bonds; hence the high rate of tax in this county.

Total valuation of products of 1879, $2,263,473.50; assessed valuation of property, March 1, 1879, $4,150,996.80; real valuation of assessed property, $6,918,328; total valuation of all property, $9,181,801.50. Value per capita of products of 1879, $149.30—; real valuation per capita of assessed property of 1879, $456.32+; valuation per capita of products of 1879, together with the real valuation of assessed property, $605.62—. Increase in cultivated area for year ending March 1, 1879, 32,410.52; number of farm dwellings erected during year ending March 1, 1879, 191; value of farm dwellings erected during year ending March 1, 1879, $32,946. Tax on each $100 of assessed valuation, $2.95+. Number of school districts, 94; number of school houses, 93; value of school buildings and grounds, $108,685; number of teachers employed during the year, 151; average wages paid, $31.89; total school expenses, $42,949.91.

MITCHELL COUNTY.	*1878.*	*1879.*
Field products	$673,469 70	$771,310 71
Increase in total value of farm animals	78,616 20	186,240 30
Products of live stock	72,457 83	118,963 58
Products of market gardens	1,615 50	4,877 30
Horticultural products	13,252 10	691 00
Total	$779,411 33	$1,082,082 89
Increase during the year		$302,671 56

Total valuation of products of 1879, $1,082,082.89; assessed valuation of property, March 1, 1879, $1,452,876.02; real valuation of assessed property, $2,421,460.03; total valuation of all property, $3,503,542.92. Value per capita of products of 1879, $77.10+; real valuation per capita of assessed property of 1879, $172.54+; valuation per capita of products of 1879, together with the real valuation of assessed property, $250.36—. Increase in cultivated area for year ending March 1, 1879, 54,133.15; number of farm dwellings erected during year ending March 1, 1879, 827; value of farm dwellings erected during year ending March 1, 1879, $61.676. Tax on each $100 of assessed valuation, $4.24+. Number of school districts, 102; number of school houses, 88; value of school buildings and grounds, $40,561; number of teachers employed during the year, 115; average wages paid, $23.16; total school expenses, $16,236.47.

MONTGOMERY COUNTY.	*1878.*	*1879.*
Field products	$983,338 98	$1,276,555 03
Increase in total value of farm animals	.....	68,959 60
Products of live stock	167,064 20	155,412 21
Products of market gardens	5,856 00	6,434 00
Apiarian products	766 05	1,443 20
Horticultural products	72,548 95	23,659 47
Total	$1,229,574 18	$1,532,463 51
Increase during the year		$302,889 33

Total valuation of products of 1879, $1,532,463.51; assessed valuation of property, March 1, 1879, $2,368,970.67; real valuation of assessed property, $3,948,284.45; total valuation of all property, $5,480,747.96. Value per capita of products of 1879, $95.90+; real valuation per capita of assessed property of 1879, $247.09+; valuation per capita of products of 1879, together with the real valuation of assessed property, $342.99+. Increase in cultivated area for year ending March 1, 1879, 4,904.22; number of farm dwellings erected during year ending March 1, 1879, 110; value of farm dwellings erected during year ending March 1, 1879, $22,703. Tax on each $100 of assessed valuation, $5.21+. Number of school districts, 102; number of school houses, 101; value of school buildings and grounds, $75,435; number of teachers employed during the year, 160; average wages paid, $30.35; total school expenses, $33,763.53.

MORRIS COUNTY.	1878.	1879.
Field products	$334,595 58	$396,053 08
Increase in total value of farm animals	39,036 30	137,953 20
Products of live stock	67,403 89	27,453 54
Products of market gardens	751 00	3,432 00
Apiarian products	97 75	1,044 60
Horticultural products	14,089 83	898 03
Total	$455,974 35	$566,834 45
Increase during the year		$110,860 10

Total valuation of products of 1879, $566,834.45; assessed valuation of property, March 1, 1879, $1,576,410.97; real valuation of assessed property, $2,627,351.62; total valuation of all property, $3,194,186.07. Value per capita of products of 1879, $78.76—; real valuation per capita of assessed property of 1879, $365.06+; valuation per capita of products of 1879, together with the real valuation of assessed property, $443.82+. Increase in cultivated area for year ending March 1, 1879, 9,091.42; number of farm dwellings erected during year ending March 1, 1879, 151; value of farm dwellings erected during year ending March 1, 1879, $20,994. Tax on each $100 of assessed valuation, $2.84—. Number of school districts, 57; number of school houses, 50; value of school buildings and grounds, $38,850; number of teachers employed during the year, 62; average wages paid, $31.32; total school expenses, $15,277.15.

NEMAHA COUNTY.	1878.	1879.
Field products	$564,692 11	$790,869 20
Increase in total value of farm animals	149,354 50	177,274 50
Products of live stock	358,546 11	291,403 17
Products of market gardens	1,422 00	3,237 40
Apiarian products	523 70	1,320 30
Horticultural products	30,699 70	5,660 56
Total	$1,105,238 12	$1,269,765 13
Increase during the year		$164,527 01

Total valuation of products of 1879, $1,269,765.13; assessed valuation of property, March 1, 1879, $2,705.478.13; real valuation of assessed property, $4,509,130.22; total valuation of all property, $5,778,895.35. Value per capita of products of 1879, $123.67—; real valuation per capita of assessed property of 1879, $439.19—; valuation per capita of products of 1879, together with the real valuation of assessed property, $562.88+. Increase in cultivated area for year ending March 1, 1879, 12,771.55; number of farm dwellings erected during year ending March 1, 1879, 115; value of farm dwellings erected during the year ending March 1, 1879, $30,676. Tax on each $100 of assessed valuation, $2.58. Number of school districts, 84; number of school houses, 80; value of school buildings and grounds, $63,783; number of teachers employed, 115; average wages paid, $32.94; total school expenses, $33,909.59.

NEOSHO COUNTY.	1878.	1879.
Field products	$838,659 84	$1,073,140 00
Increase in total value of farm animals	.....	72,958 30
Products of live stock	214,483 28	189,983 74
Products of market gardens	2,966 00	3,513 00
Apiarian products	922 20	3,074 75
Horticultural products	78,627 08	7,396 33
Total	$1,135,658 40	$1,350,066 12
Increase during the year		$214,407 72

Total valuation of products of 1879, $1,354,066.12; assessed valuation of property, March 1, 1879, $2,307,074.90; real valuation of assessed property, $3,845,124.83; total valuation of all property, $5,195,190.95. Value per capita of products of 1879, $99.31+; real valuation per capita of assessed property of 1879, $282.86—; valuation per capita of products of 1879, together with the real valuation of assessed property, $382.17—. Decrease in cultivated area for year ending March 1, 1879, 8,890.55; number of farm dwellings erected during year ending March 1, 1879, 67; value of farm dwellings erected

during year ending March 1, 1879, $11,675. Tax on each $100 of assessed valuation, $3.50+. Number of school districts, 95; number of school houses, 94; value of school buildings and grounds, $85,725; number of teachers employed during the year, 134; average wages paid, $26.42; total school expenses, $24,642.60.

NORTON COUNTY.	*1878.*	*1879.*
Field products	$141,609 53	$260,616 25
Increase in total value of farm animals	45,884 10	36,291 90
Products of live stock	12,554 40	18,202 89
Products of market gardens	90 00	192 00
Horticultural products	46 00	.....
Total	$200,184 03	$315,303 04
Increase during the year		$115,119 01

Total valuation of products of 1879, $315,303.04; assessed valuation of property, March 1, 1879, $157,728; real valuation of assessed property, $262,880; total valuation of all property, $578,183.04. Value per capita of products of 1879, $65.73—; real valuation per capita of assessed property of 1879, $54.80+; valuation per capita of products of 1879, together with the real valuation of assessed property, $120.53+. Increase in cultivated area for the year ending March 1, 1879, 7,010.25; number of farm dwellings erected during year ending March 1, 1879, 123; value of farm dwellings erected during year ending March 1, 1879, $15,758. Tax on each $100 of assessed valuation, $3.60. Number of school districts, 52; number of school houses, 25; value of school buildings and grounds, $795; number of teachers employed during the year, 30; average wages paid, $16.12; total school expenses, $1,657.61.

OSAGE COUNTY.	*1878.*	*1879.*
Field products	$755,773 49	$970,261 83
Increase in total value of farm animals	75,859 60	134,932 40
Products of live stock	192,495 03	204,320 85
Products of market gardens	2,979 00	4,282 75
Apiarian products	624 00	907 30
Horticultural products	55,461 17	7,405 69
Total	$1,083,192 29	$1,322,110 82
Increase during the year		$238,918 53

Total valuation of products of 1879, $1,322,110.82; assessed valuation of property, March 1, 1879, $2,797,960.14; real valuation of assessed property, $4,663,266.90; total valuation of all property, $5,985,377.72. Value per capita of products of 1879, $86.02+; real valuation per capita of assessed property of 1879, $303.42+; valuation per capita of products of 1879, together with the real valuation of assessed property, $389.45—. Increase in cultivated area for year ending March 1, 1879, 12,601.92; number of farm dwellings erected during year ending March 1, 1879, 86; value of farm dwellings erected during year ending March 1, 1879, $13,001. Tax on each $100 of assessed valuation, $3.77—. Number of school districts, 94; number of school houses, 88; value of school buildings and grounds, $108,450; number of teachers employed during the year, 141; average wages paid, $32; total school expenses, $36,102.84.

OSBORNE COUNTY.	*1878.*	*1879.*
Field products	$408,797 52	$637,237 80
Increase in total value of farm animals	166,614 20	171,089 80
Products of live stock	30,125 35	59,479 50
Products of market gardens	839 00	1,426 40
Apiarian products	5 00	.....
Horticultural products	790 79	50 00
Total	$607,171 86	$869,283 50
Increase during the year		$262,111 64

Total valuation of products of 1879, $869,283.50; assessed valuation of property, March

1, 1879, $546,750.94; real valuation of assessed property, $911,251.57; total valuation of all property, $1,780,535.07. Value per capita of products of 1879, $92.04—; real valuation per capita of assessed property of 1879, $96.48—; valuation per capita of products of 1879, together with the real valuation of assessed property, $188.52—. Increase in cultivated area for year ending March 1, 1879, 17,046.38; number of farm dwellings erected during year ending March 1, 1879, 831; value of farm dwellings erected during year ending March 1, 1879, $7,745.* Tax on each $100 of assessed valuation, $4.24+. Number of school districts, 93; number of school houses, 57; value of school buildings and grounds, $16,600; number of teachers employed during the year, 90; average wages paid, $16.75; total school expenses, $8,307.19.

OTTAWA COUNTY.	*1878.*	*1879.*
Field products	$691,328 21	$690,966 03
Increase in total value of farm animals	49,881 10	127,511 40
Products of live stock	109,163 72	131,095 19
Products of market gardens	757 50	1,679 00
Apiarian products	30 00	50 50
Horticultural products	9,407 94	240 94
Total	$860,568 47	$951,543 06
Increase during the year		$90,974 59

Total valuation of products of 1879, $951,543.06; assessed valuation of property, March 1, 1879, $1,143,406.35; real valuation of assessed property, $1,905,677.25; total valuation of all property, $2,857,220.31. Value per capita of products of 1879, $108.66+; real valuation per capita of assessed property of 1879, $217.62—; valuation per capita of products of 1879, together with the real valuation of assessed property, $326.28—. Increase in cultivated area for year ending March 1, 1879, 17,951,86; number of farm dwellings erected during year ending March 1, 1879, 390; value of farm dwellings erected during year ending March 1, 1879, $82,476. Tax on each $100 of assessed valuation, $4.78—. Number of school districts, 75; number of school houses, 75; value of school buildings and grounds, $31,400; number of teachers employed during the year, 96; average wages paid, $24.05; total school expenses, $11,284.55.

PAWNEE COUNTY.	*1878.*	*1879.*
Field products	$515,205 04	$298,939 99
Increase in total value of farm animals	70,096 80	86,389 70
Products of live stock	12,941 65	41,485 34
Products of market gardens	229 60	3,061 25
Horticultural products	86 66	400 00
Total	$598,559 75	$430,276 28
Decrease during the year		$168,283 47

Total valuation of products of 1879, $430,276.28; assessed valuation of property, March 1, 1879, $1,061,961.78; real valuation of assessed property, $1,769,936.30; total valuation of all property, $2,200,212.58. Value per capita of products of 1879, $61.27—; real valuation per capita of assessed property of 1879, $252.02—; valuation per capita of products of 1879, together with the real valuation of assessed property, $313.29—. Increase in cultivated area for year ending March 1, 1879, 29,298.99; number of farm dwellings erected during year ending March 1, 1879, 228; value of farm dwellings erected during year ending March 1, 1879, $45,502. Tax on each $100 of assessed valuation, $3.89—. Number of school districts, 50; number of school houses, 49; value of school buildings and grounds, $31,854; number of teachers employed during the year, 71; average wages paid, $30.41; total school expenses, $16,521.17.

*Value returned for five townships, value for thirteen townships being omitted.

PHILLIPS COUNTY.	1878.	1879.
Field products	$328,672 36	$546,485 69
Increase in the total value of farm animals	2,256 80	86,956 70
Products of live stock	24,786 70	59,197 02
Products of market gardens	326 00	1,682 89
Horticultural products	90 60	150 00
Total	$356,132 46	$694,472 30
Increase during the year		$338,339 84

Total valuation of products of 1879, $694,472.30; assessed valuation of property, March 1, 1879, $380,986; real valuation of assessed property, $634,976.67; total valuation of all property, $1,329,448.97. Value per capita of products of 1879, $87.29—; real valuation per capita of assessed property of 1879, $79.81+; valuation per capita of products of 1879, together with the real valuation of assessed property, $167.10+. Increase in cultivated area for year ending March 1, 1879, 33,572.13; number of farm dwellings erected during year ending March 1, 1879, 300; value of farm dwellings erected during year ending March 1, 1879, $19,495. Tax on each $100 of assessed valuation, $4.50—. Number of school districts, 70; number of school houses, 67; value of school buildings and grounds, $7,450; number of teachers employed during the year, —; average wages paid, $15.75; total school expenses, $4,475.46.

POTTAWATOMIE COUNTY.	1878.	1879.
Field products	$652,506 28	$889,442 12
Increase in total value of farm animals	177,971 30	253,568 70
Products of live stock	283,277 87	351,263 93
Products of market gardens	917 25	2,010 62
Apiarian products	181 40	1,071 35
Horticultural products	25,808 67	4,615 88
Total	$1,140,662 77	$1,501,972 60
Increase during the year		$361,309 83

Total valuation of products of 1879, $1,501,972.60; assessed valuation of property, March 1, 1879, $3,195,307.45; real valuation of assessed property, $5,325,512.42; total valuation of all property, $6,827,485.02. Value per capita of products of 1879, $108.91—; real valuation per capita of assessed property of 1879, $386.16—; valuation per capita of products of 1879, together with the real valuation of assessed property, $495.07—. Increase in cultivated area for year ending March 1, 1879, 19,746.66; number of farm dwellings erected during year ending March 1, 1879, 219; value of farm dwellings erected during year ending March 1, 1879, $33.024. Tax on each $100 of assessed valuation, $2.30+. Number of school districts, 84; number of school houses, 86; value of school buildings and grounds, $48.867; number of teachers employed during the year, 120; average wages paid, $30.62; total school expenses, $27,396.37.

PRATT COUNTY.	1879.
Field products	$32,890 85
Increase in total value of farm animals	60,439 50
Products of live stock	1,365 90
Horticultural products	25 00
Total	$94,721 25

Total valuation of products of 1879, $94,721.25; assessed valuation of property, March 1, 1879, ————; real valuation of assessed property, ————;* total valuation of all property, ————. Value per capita of products of 1879, $45.45+; real valuation per capita of assessed property of 1879, ————.* Increase in cultivated area for year ending March 1, 1879, 9,287.25; number of farm dwellings erected during year ending March 1, 1879, 42; value of farm dwellings erected during year ending

*No returns.

March 1, 1879, $4,112. Tax on each $100 of assessed valuation, $3.25+. Number of school districts, 12; number of school houses, —; value of school buildings and grounds, ————; number of teachers employed during the year, —; average wages paid, —; total school expenses, ————.

RENO COUNTY.	*1878.*	*1879.*
Field products	$959,966 58	$675,515 00
Increase in total value of farm animals	141,605 10	92,459 40
Products of live stock	60,761 31	72,121 84
Products of market gardens	3,084 00	7,486 00
Apiarian products	.....	1 25
Horticultural products	4,084 40	1,830 00
Total	$1,169,501 39	$849,413 49
Decrease during the year		$220,087 90

Total valuation of products of 1879, $849,413.49; assessed valuation of property, March 1, 1879, $1,647,322.16; real valuation of assessed property, $2,745,536.93; total valuation of all property, $3,594,950.42. Value per capita of products of 1879, $70.54—; real valuation per capita of assessed property of 1879, $227.99—; valuation per capita of products of 1879, together with the real valuation of assessed property, $299.36+. Increase in cultivated area for year ending March 1, 1879, 3,134.17; number of farm dwellings erected during year ending March 1, 1879, 323; value of farm dwellings erected during year ending March 1, 1879, $41,721. Tax on each $100 of assessed valuation, $5.14+. Number of school districts, 99; number of school houses, 89; value of school buildings and grounds, $68,478; number of teachers employed during the year, 112; average wages paid, $26.13; total school expenses, $25,047.88.

REPUBLIC COUNTY.	*1878.*	*1879.*
Field products	$813,705 23	$948,847 87
Increase in total value of farm animals	101,514 70	184,530 80
Products of live stock	138,286 90	183,531 35
Products of market gardens	2,277 50	2,460 00
Apiarian products	.....	25 00
Horticultural products	13,508 28	1,426 78
Total	$1,069,292 61	$1,320,821 80
Increase during the year		$251,529 19

Total valuation of products of 1879, $1,320,821.80; assessed valuation of property, March 1, 1879, $1,420,610.17; real valuation of assessed property, $2,367,683.62; total valuation of all property, $3,688,505.42. Value per capita of products of 1879, $108.33—; real valuation per capita of assessed property of 1879, $194.18+; valuation per capita of products of 1879, together with the real valuation of assessed property, $302.51+. Increase in cultivated area for year ending March 1, 1879, 19,414.48; number of farm dwellings erected during year ending March 1, 1879, 284; value of farm dwellings erected during year ending March 1, 1879, $45,773. Tax on each $100 of assessed valuation, $3.83+. Number of school districts, 104; number of school houses, 98; value of school buildings and grounds, $33,465; number of teachers employed during the year, 126; average wages paid, $24.44; total school expenses, $16,519.39.

RICE COUNTY.	*1878.*	*1879.*
Field products	$611,606 69	$560,896 15
Increase in total value of farm animals	57,572 80	51,198 70
Products of live stock	40,366 36	46,681 95
Products of market gardens	3,829 50	4,331 00
Apiarian products	6 75	18 75
Horticultural products	2,388 04	300 00
Total	$715,770 14	$663,426 55
Decrease during the year		$52,343 59

Total valuation of products of 1879, $663,426.55; assessed valuation of property, March 1, 1879, $1,109,841.26; real valuation of assessed property, $1,849,735.43; total valuation of all property, $2,513,161.98. Value per capita of products of 1879, $88.44+; real valuation per capita of assessed property of 1879, $246.60—; valuation per capita of products of 1879, together with the real valuation of assessed property, $335.04+. Increase in cultivated area for year ending March 1, 1879, 17,698.61. Number of farm dwellings erected during year ending March 1, 1879, 225; value of farm dwellings erected during year ending March 1, 1879, $54,904. Tax on each $100 of assessed valuation, $4.24+. Number of school districts, 62; number of school houses, 53; value of school buildings and grounds, $38,016; number of teachers employed during the year, 68; average wages paid, $28.20; total school expenses, $22,895.33.

RILEY COUNTY.	*1878.*	*1879.*
Field products	$487,909 78	$627,535 27
Increase in total value of farm animals	116,253 10	124,686 90
Products of live stock	210,412 78	205,404 54
Products of market gardens	2,335 00	1,469 00
Apiarian products	375 75	1,137 75
Horticultural products	17,086 67	1,687 72
Total	$834,373 08	$961,921 18
Increase during the year		$127,548 10

Total valuation of products of 1879, $961,921.18; assessed valuation of property, March 1, 1879, $1,914,045.85; real valuation of assessed property, $3,190,076.42; total valuation of all property, $4,151,997.60. Value per capita of products of 1879, $129.65+; real valuation per capita of assessed property of 1879, $429.99—; valuation per capita of products of 1879, together with the real valuation of assessed property, $559.64+. Decrease in cultivated area for year ending March 1, 1879, 364.50; number of farm dwellings erected during year ending March 1, 1879, 65; value of farm dwellings erected during year ending March 1, 1879, $12,100. Tax on each $100 of assessed valuation, $3.25. Number of school districts, 61; number of school houses, 59; value of school buildings and grounds, $55,425; number of teachers employed during the year, 74; average wages paid, $27.88; total school expenses, $18,683.44.

ROOKS COUNTY.	*1878.*	*1879.*
Field products	$56,848 87	$203,054 05
Increase in total value of farm animals	23,114 10	108,845 90
Products of live stock	4,600 01	11,941 62
Products of market gardens	516 00	1,242 00
Horticultural products	244 86	50 00
Total	$85,323 84	$325,133 57
Increase during the year		$239,809 73

Total valuation of products of 1879, $325,133.57; assessed valuation of property, March 1, 1879, $144,940.35; real valuation of assessed property, $241,567.25; total valuation of all property, $566,700.82. Value per capita of products of 1879, $63.70+; real valuation per capita of assessed property of 1879, $47.33—; valuation per capita of products of 1879, together with the real valuation of assessed property, $111.03+. Increase in cultivated area for the year ending March 1, 1879, 14,715.25; number of farm dwellings erected during year ending March 1, 1879, 416; value of farm dwellings erected during year ending March 1, 1879, $34,944. Tax on each $100 of assessed valuation, ——*. Number of school districts, 56; number of school houses, 14; value of school buildings and grounds, $1,775; number of teachers employed during the year, 31; average wages paid, $14.64; total school expenses, $1,013.26.

*No returns for 1879.

RUSH COUNTY.	1878.	1879.
Field products	$152,343 81	$181,910 05
Increase in total value of farm animals	48,483 80	83,574 70
Products of live stock	4,754 97	12,457 50
Products of market gardens	111 50	473 00
Horticultural products	99 37	.....
Total	$205,793 45	$278,415 25
Increase during the year		$72,621 80

Total valuation of products of 1879, $278,415.25; assessed valuation of property, March 1, 1879, $267,115.38; real valuation of assessed property, $445,192.30; total valuation of all property, $723,607.55. Value per capita of products of 1879, $52.71+; real valuation per capita of assessed property of 1879, $84.28+; valuation per capita of products of 1879, together with the real valuation of assessed property, $136.99+. Increase in cultivated area for year ending March 1, 1879, 27,690.50; number of farm dwellings erected during year ending March 1, 1879, 571; value of farm dwellings erected during year ending March 1, 1879, $53,316. Tax on each $100 of assessed valuation, $5.12. Number of school districts, 42; number of school houses, 26; value of school buildings and grounds, $7,980; number of teachers employed during the year, 30; average wages paid, $21.87; total school expenses, $5,643.26.

RUSSELL COUNTY.	1878.	1879.
Field products	$245,070 31	$376,660 77
Increase in total value of farm animals	39,717 50	10,688 50
Products of live stock	33,598 65	36,455 33
Products of market gardens	1,030 00	1,137 50
Horticultural products	1,044 77	325 00
Total	$320,461 23	$425,267 10
Increase during the year		$104,805 87

Total valuation of products of 1879, $425,267.10; assessed valuation of property, March 1, 1879, $884,289.41; real valuation of assessed property, $1,473,815.68; total valuation of all property, $1,899,082.78. Value per capita of products of 1879, $65.22—; real valuation per capita of assessed property of 1879, $226.01+; valuation per capita of products of 1879, together with the real valuation of assessed property, $291.23—. Increase in cultivated area for year ending March 1, 1879, 21,394.50; number of farm dwellings erected during year ending March 1, 1879, 463; value of farm dwellings erected during year ending March 1, 1879, $59,632. Tax on each $100 of assessed valuation, $3.90—.* Number of school districts, 43; number of school houses, 22; value of school buildings and grounds, $21,585; number of teachers employed during the year, 39; average wages paid, $26.73; total school expenses, $10,105.84.

SALINE COUNTY.	1878.	1879.
Field products	$1,303,801 54	$1,119,569 82
Increase in total value of farm animals	60,987 70	95,698 80
Products of live stock	104,648 45	102,252 10
Products of market gardens	2,506 00	4,600 00
Apiarian products	75	12 50
Horticultural products	11,159 38	750 00
Total	$1,483,103 82	$1,322,883 22
Decrease during the year		$160,220 60

Total valuation of products of 1879, $1,322,883.22; assessed valuation of property, March 1, 1879, $2,780,902.27; real valuation of assessed property, $4,634,837.12; total valuation of all property, $5,957,720.34. Value per capita of products of 1879, $106.48—; real valuation per capita of assessed property of 1879, $373.06—; valuation per capita of products of 1879, together with the real valuation of assessed property, $479.53+. Increase in cultivated area for year ending March 1, 1879, 18,595.52; number of farm

*Returns for 1878; no returns for 1879.

dwellings erected during year ending March 1, 1879, 306; value of farm dwellings erected during year ending March 1, 1879, $72,714. Tax on each $100 of assessed valuation, $3.56+. Number of school districts, 68; number of school houses, 66; value of school buildings and grounds, $77,439; number of teachers employed during the year, 98; average wages paid, $31.50; total school expenses, $26,484.87.

SEDGWICK COUNTY.	*1878.*	*1879.*
Field products	$1,898,223 21	$1,565,292 06
Increase in total value of farm animals	16,589 70	231,054 80
Products of live stock	101,748 09	165,096 19
Products of market gardens	4,706 05	6,830 00
Apiarian products	2 50	19 75
Horticultural products	40,918 41	4,737 00
Total	$2,062,187 96	$1,973,029 80
Decrease during the year		$89,158 16

Total valuation of products of 1879, $1,973,029.80; assessed valuation of property, March 1, 1879, $2,818,847.36; real valuation of assessed property, $4,698,078.93; total valuation of all property, $6,671,108.73. Value per capita of products of 1879, $112.02+; real valuation per capita of assessed property of 1879, $266.74—; valuation per capita of products of 1879, together with the real valuation of assessed property, $378.76+. Increase in cultivated area for year ending March 1, 1879, 32,554.12; number of farm dwellings erected during year ending March 1, 1879, 262; value of farm dwellings erected during year ending March 1, 1879, $37,694. Tax on each $100 of assessed valuation, $4.66+. Number of school districts, 122; number of school houses, 113; value of school buildings and grounds, $50,469; number of teachers employed during the year, 136; average wages paid, $26.13; total school expenses, $31,390.15.

SHAWNEE COUNTY.	*1878.*	*1879.*
Field products	$760,251 89	$1,079,754 22
Increase in total value of farm animals	97,711 20	227,647 80
Products of live stock	308,879 23	303,650 41
Products of market gardens	11,913 85	17,992 00
Apiarian products	1,099 50	1,440 90
Horticultural products	54,625 99	12,269 47
Total	$1,234,481 66	$1,642,754 80
Increase during the year		$408,273 14

Total valuation of products of 1879, $1,642,754.80; assessed valuation of property, March 1, 1879, $5,624,326.70; real valuation of assessed property, $9,373,877.83; total valuation of all property, $11,016,632.63. Value per capita of products of 1879, $72.59—; real valuation per capita of assessed property of 1879, $414.19—; valuation per capita of products of 1879, together with the real valuation of assessed property, $486.77+. Increase in cultivated area for year ending March 1, 1879, 16,962.19; number of farm dwellings erected during year ending March 1, 1879, 383; value of farm dwellings erected during year ending March 1, 1879, $195,768. Tax on each $100 of assessed valuation, $3.35+. Number of school districts, 79; number of school houses, 83; value of school buildings and grounds, $164,720; number of teachers employed during the year, 121; average wages paid, $34.96; total school expenses, $48,554.88.

SMITH COUNTY.	*1878.*	*1879.*
Field products	$455,372 73	$844,157 70
Increase in total value of farm animals	111,270 70	160,713 80
Products of live stock	71,932 16	92,413 75
Products of market gardens	949 80	1,810 30
Apiarian products	.....	9 25
Horticultural products	1,796 24	200 00
Total	$641,321 63	$1,099,304 80
Increase during the year		$457,983 17

Total valuation of products of 1879, $1,099,304.80; assessed valuation of property, March 1, 1879, $588,161.62; real valuation of assessed property, $980,269.37; total valuation of all property, $2,079,574.17. Value per capita of products of 1879, $95.61—; real valuation per capita of assessed property of 1879, $85.25+; valuation per capita of products of 1879, together with the real valuation of assessed property, $180.86+. Increase in cultivated area for year ending March 1, 1879, 40,874.00; number of farm dwellings erected during year ending March 1, 1879, 337; value of farm dwellings erected during year ending March 1, 1879, $40,173. Tax on each $100 of assessed valuation, $3.61+. Number of school districts, 118; number of school houses, 70; value of school buildings and grounds, $12,187; number of teachers employed during the year, 132; average wages paid, $18.40; total school expenses, $12,311.59.

SUMNER COUNTY.	*1878.*	*1879.*
Field products	$1,563,949 41	$1,422,517 31
Increase in total value of farm animals	149,954 90	170,423 10
Products of live stock	76,129 25	109,690 24
Products of market gardens	2,074 50	2,231 50
Apiarian products	13 75	.....
Horticultural products	28,401 37	2,308 86
Total	$1,820,523 18	$1,707,171 01
Decrease during the year		$113,352 17

Total valuation of products of 1879, $1,707,171.01; assessed valuation of property, March 1, 1879, $2,135,350.06; real valuation of assessed property, $3,558,916.76; total valuation of all property, $5,266,087.77. Value per capita of products of 1879, $113.13+; real valuation per capita of assessed property of 1879, $235.85—; valuation per capita of products of 1879, together with the real valuation of assessed property, $348.98—. Increase in cultivated area for year ending March 1, 1879, 56,478.83; number of farm dwellings erected during year ending March 1, 1879, 485; value of farm dwellings erected during year ending March 1, 1879, $53,464. Tax on each $100 of assessed valuation, $3.44+. Number of school districts, 143; number of school houses, 112; value of school buildings and grounds, $61,175; number of teachers employed during the year, 144; average wages paid, $26.34; total school expenses, $22,380.62.

WABAUNSEE COUNTY.	*1878.*	*1879.*
Field products	$390,522 65	$543,731 49
Increase in total value of farm animals	84,897 20	163,062 80
Products of live stock	142,344 93	132,721 21
Products of market gardens	656 00	2,163 00
Apiarian products	67 00	272 40
Horticultural products	19,676 05	1,875 00
Total	$638,163 83	$843,825 90
Increase during the year		$205,652 07

Total valuation of products of 1879, $843,825.90; assessed valuation of property, March 1, 1879, $1,704,404.39; real valuation of assessed property, $2,840,673.98; total valuation of all property, $3,684,499.88. Value per capita of products of 1879, $135.12+; real valuation per capita of assessed property of 1879, $454.87+; valuation per capita of products of 1879, together with the real valuation of assessed property, $589.99+. Increase in cultivated area for year ending March 1, 1879, 18,404,75; number of farm dwellings erected during year ending March 1, 1879, 119; value of farm dwellings erected during year ending March 1, 1879, $24,806. Tax on each $100 of assessed valuation, $2.86+. Number of school districts, 61; number of school houses, 57; value of school buildings and grounds, $36,880; number of teachers employed during the year, 83; average wages paid, $30.90; total school expenses, $19,872.12.

WASHINGTON COUNTY.	*1878.*	*1879.*
Field products	$744,850 19	$927,365 68
Increase in total value of farm animals	230,665 00	144,048 00
Products of live stock	107,355 44	164,820 16
Products of market gardens	2,423 00	2,927 00
Apiarian products	18 50	118 50
Horticultural products	22,035 36	1,574 03
Total	$1,107,347 49	$1,240,853 37
Increase during the year		$133,505 88

Total valuation of products of 1879, $1,240,853.37; assessed valuation of property, March 1, 1879, $2,056,502.60; real valuation of assessed property, $3,427,504.33; total valuation of all property, $4,668,357.70. Value per capita of products of 1879, $104 27+; real valuation per capita of assessed property of 1879, $288.03—; valuation per capita of products of 1879, together with the real valuation of assessed property, $392.30—. Increase in cultivated area for year ending March 1, 1879, 13,768.55; number of farm dwellings erected during year ending March 1, 1879, 163; value of farm dwellings erected during year ending March 1, 1879, $32,869. Tax on each $100 of assessed valuation, $3.62+. Number of school districts, 112; number of school houses, 104; value of school buildings and grounds, $58,512; number of teachers employed during the year, 151; average wages paid, $27.50; total school expenses, $32,671.60.

WILSON COUNTY.	*1878.*	*1879.*
Field products	$797,247 64	$1,008,544 88
Increase in total value of farm animals	13,239 70	1,646 80
Products of live stock	179,383 76	143,372 29
Products of market gardens	18,238 00	3,205 12
Apiarian products	442 25	1,435 00
Horticultural products	63,782 50	12,117 90
Total	$1,072,333 85	$1,170,321 99
Increase during the year		$97,988 14

Total valuation of products of 1879, $1,170,321.99; assessed valuation of property, March 1, 1879, $1,724,005.12; real valuation of assessed property, $2,873,341.87; total valuation of all property, $4,043,663.86. Value per capita of products of 1879, $98.34—; real valuation per capita of assessed property of 1879, $241.44—; valuation per capita of products of 1879, together with the real valuation of assessed property, $339.78—. Increase in cultivated area for year ending March 1, 1879, 17,133.39; number of farm dwellings erected during year ending March 1, 1879, 89; value of farm dwellings erected during the year ending March 1, 1879, $17,489. Tax on each $100 of assessed valuation, $3.53. Number of school districts, 97; number of school houses, 97; value of school buildings and grounds, $58,722; number of teachers employed, 129; average wages paid, $25.65; total school expenses, $22,210.62.

WOODSON COUNTY.	*1878.*	*1879.*
Field products	$300,503 48	$365,186 03
Increase in total value of farm animals	111,906 10	72,050 40
Products of live stock	108,449 97	141,050 33
Products of market gardens	1,332 25	1,366 00
Apiarian products	332 10	642 00
Horticultural products	29,978 40	820 00
Total	$552,502 30	$581,114 76
Increase during the year		$28,612 46

Total valuation of products of 1879, $581,114.76; assessed valuation of property, March 1, 1879, $1,352,052.73; real valuation of assessed property, $2,253,421.22; total valuation of all property, $2,834,535.98. Value per capita of products of 1879, $95.93—; real valuation per capita of assessed property of 1879, $371.97+; valuation per capita of products of 1879, together with the real valuation of assessed property, $467.90—. Increase in cultivated area for year ending March 1, 1879, 10,143.20; number of farm

dwellings erected during year ending March 1, 1879, 48; value of farm dwellings erected during year ending March 1, 1879, $6,984. Tax on each $100 of assessed valuation, $3.04+. Number of school districts, 59; number of school houses, 60; value of school buildings and grounds, $29,125; number of teachers employed during the year, 72; average wages paid, $26.08; total school expenses, $14,662.03.

WYANDOTTE COUNTY.	*1878.*	*1879.*
Field products	$411,936 64	$627,851 23
Increase in total value of farm animals	.....	70,847 40
Products of live stock	132,268 70	85,302 95
Products of market gardens	17,784 00	23,949 00
Apiarian products	3,905 45	4,586 25
Horticultural products	40,097 87	25,833 07
Total	$605,992 66	$838,369 90
Increase during the year	.....	$232,377 24

Total valuation of products of 1879, $838,369.90; assessed valuation of property, March 1, 1879, $2,416,449.52; real valuation of assessed property, $4,027,415.86; total valuation of all property, $4,865,785.76. Value per capita of products of 1879, $55.72+; real valuation per capita of assessed property of 1879, $267.67+; valuation per capita of products of 1879, together with the real valuation of assessed property, $323.39—. Increase in cultivated area for year ending March 1, 1879, 7,284.08; number of farm dwellings erected during year ending March 1, 1879, 92; value of farm dwellings erected during year ending March 1, 1878, 13,094. Tax on each $100 of assessed valuation, $4.58. Number of school districts, 39; number of school houses, 43; value of school buildings and grounds, $73,850; number of teachers employed during the year, 59; average wages paid, $40.76; total school expenses, $23,224.81.

SUMMARY FOR THE STATE.	*1878.*	*1879.*
Field products	$49,914,434 38	$60,129,780 73
Increase in total value of farm animals	6,401,871 30	8,504,684 20
Products of live stock	10,415,339 32	11,507,715 46
Products of market gardens	247,510 29	307,292 48
Apiarian products	55,141 15	94,789 30
Horticultural products	2,642,770 87	488,594 88
Total	$69,677,067 31	$81,032,857 05
Increase during the year	.....	$11,355,789 74

Total valuation of products of 1879, $81,032,857.05; assessed valuation of property, March 1, 1879, $144,930,279.69; real valuation of assessed property, $241,550,466.51; total valuation of all property, $322,611,187.86. Value per capita of products of 1879, $97.80—; real valuation per capita of assessed property of 1879, $286.21+; valuation per capita of products of 1879, together with the real valuation of assessed property, $384.01+. Increase in cultivated area for year ending March 1, 1879, 1,270,492.82; number of farm dwellings erected during year ending March 1, 1879, 15,952; value of farm dwellings erected during year ending March 1, 1879, $2,802,053. Tax on each $100 of assessed valuation, $3.56+. Number of school districts, 5,575; number of school houses, 4,934; value of school buildings and grounds, $3,916,931; number of teachers employed during the year, 6,707; average wages paid, $27.09; total school expenses, $1,590,794.30.

POPULATION OF KANSAS.

Counties.	*Enumeration of inhabitants, 1878.*	*Enumeration of inhabitants, 1879.*	*Incr.*	*Decr.*	*Counties.*	*Enumeration of inhabitants, 1878.*	*Enumeration of inhabitants, 1879.*	*Incr.*	*Decr.*
Allen	8,964	10,116	1,152	.....	Marion	8,306	10,154	1,848	.....
Anderson	6,000	6,616	616	.....	Marshall	12,270	17,129	4,859	.....
*Atchison	20,600	21,700	1,100	.....	McPherson	11,291	13,196	1,905	.....
Barbour	1,388	2,016	628	.....	Miami	14,433	15,161	728	.....
Barton	8,251	12,333	4,082	.....	Mitchell	8,673	14,034	5,361	.....
Bourbon	17,741	18,310	569	.....	Montgomery	16,468	15,979	.....	489
Brown	10,446	10,790	344	.....	Morris	5,656	7,197	1,541	.....
Butler	14,175	17,006	2,831	.....	Nemaha	8,876	10,267	1,391	.....
Chautauqua	9,246	10,537	1,291	.....	Neosho	11,055	13,594	2,539	.....
Chase	3,798	4,743	945	.....	Norton	1,855	4,797	2,942	.....
Cherokee	17,770	18,535	765	.....	Osage	12,618	15,369	2,751	.....
Clay	8,759	10,658	1,899	.....	Osborne	6,125	9,445	3,320	.....
Cloud	10,183	12,656	2,473	.....	Ottawa	6,664	8,757	2,093	.....
Coffey	8,599	10,077	1,478	.....	Pawnee	6,114	7,023	909	.....
Cowley	15,390	18,157	2,767	.....	Phillips	5,436	7,956	2,520	.....
Crawford	12,759	14,622	1,863	.....	Pottawatomie	11,196	13,791	2,595	.....
Davis	5,382	6,087	705	.....	†Pratt (*a*)	.....	2,084	2,084	.....
Dickinson	10,850	13,005	2,155	.....	Reno	11,528	12,042	514	.....
Doniphan	15,122	15,459	337	.....	Republic	10,132	12,193	2,061	.....
Douglas	18,931	20,530	1,599	.....	Rice	6,149	7,501	1,352	.....
Edwards	1,700	2,801	1,101	.....	‡Riley	7,419	7,419	.....	.....
Elk	8,218	8,787	569	.....	Rooks	2,100	5,104	3,004	.....
Ellis	2,437	5,240	2,803	.....	Rush	2,794	5,282	2,488	.....
Ellsworth	5,057	6,741	1,684	.....	Russell	3,239	6,521	3,282	.....
Ford	2,160	2,832	672	.....	Saline	9,530	12,424	2,894	.....
Franklin	12,381	14,073	1,692	.....	Sedgwick	15,220	17,613	2,393	.....
Greenwood	7,648	8,202	554	.....	Shawnee	19,114	22,632	3,518	.....
†Harper	.....	2,158	2,158	.....	Smith	8,315	11,498	3,183	.....
Harvey	8,107	10,440	2,333	.....	†Stafford (*b*)	.....	2,364	2,364	.....
†Hodgeman	.....	1,738	1,738	.....	Sumner	12,078	15,090	3,012	.....
Jackson	7,930	8,732	802	.....	†Trego	.....	2,310	2,310	.....
Jefferson	12,471	13,872	1,401	.....	Wabaunsee	5,386	6,245	859	.....
Jewell	11,388	14,161	2,773	.....	Washington	10,319	11,900	1,581	.....
Johnson	18,139	16,012	.....	2,127	Wilson	11,760	11,901	141	.....
Kingman	.....	2,599	2,599	.....	Woodson	5,514	6,058	544	.....
Labette	17,196	18,171	975	.....	Wyandotte	13,161	15,046	1,885	.....
Leavenworth,	28,544	30,283	1,739	.....	*Unorganized counties	8,500	15,000	6,500	.....
Lincoln	4,611	7,448	2,837	.....					
Linn	13,228	14,586	1,358	.....					
Lyon	13,634	15,073	1,439	.....	Total	708,497	849,978	144,097	2,616

Actual increase during the year ending March 1st, 1879, **141,481.**

*Estimated by assessors.

†Harper organized August 5th, 1878; Hodgeman organized March 29th, 1879; Stafford organized June 30th, 1879; Pratt organized July 25th, 1879; Trego organized June 21, 1879—which accounts for no official returns for 1878.

‡Returns for 1878; no enumeration for 1879.

(*a*) In 1878, Pratt county, then unorganized, was attached to Reno as a township thereof, and to which the enumeration was made. Population, March 1, 1878, 2,180.

(*b*) At the time of the reinstatement of Stafford county, by decision of the Supreme Court, June 1879, Barton county extended to the south line of township 23. By said decision, twelve townships were taken from the south part of Barton and added to Stafford. As the enumeration of inhabitants for Barton was taken March 1st, 1879, the returns for said twelve townships appear in the Barton county returns, and show a population of 2,367, or 197 to each of the Congressional townships. June, 1879, at time of said decision, the population of Stafford county was 4,731. Deducting the population returned to Barton county (twelve townships), 2,367, from that of Stafford county (4,731), we have left 2,364 for the remainder of the territory of Stafford county.

METEOROLOGICAL.

STATIONS.	JANUARY, 1879.				FEBRUARY, 1879.				NAMES OF REPORTERS.
	Mean temperature of month...	Max. temperature of month...	Min. temperature of month...	Rainfall for month.....	Mean temperature of month...	Max. temperature of month...	Min. temperature of month...	Rainfall for month.....	
Lawrence.....	23.49°	53°	-16°	.37	34.06°	74°	5°	.41	F. H Snow.
Leavenworth	23.63	56	-14	1.16	32.93	69	.....	.54	Samuel W. Rhode, U. S. A.
Manhattan.....	21.25	58	-14	.75	31.21	65	5	.....	G. H. Failyer.
Independence.....	27.80	70	-8	2.03	36.30	74	11	1.30	J. M. Altaffer.
Great Bend.....	24.55	63	-14	1.07	35.55	76	6	.25	B. B. Smyth.
Salina.....	24.00	64	-18	1.35	35.00	81	7	.12	Wm. Pettes.
Gaylord.....	25.05	70	-20	.76	.....	.....	.....	.....	H. C. Sunderland.
Osborne.....	22.87	64	-11	1.00	29.64	70	2	.16	R. B. Foster.
Kinsley.....	.....	.....	.....	.85	.....	.....	.....	.38	J. A. Walker.
Fort Wallace.....	20.42	68	-8	.45	30.95	84	2	.36	Chas. F. Swallow, U. S. A.
Creswell.....	24.11	55	-12	1.55	30.12	78	6	,45	Chas. E. Whitney.
Cedar Vale.....	29.79	65	-3	2.12	37.94	78	12	.88	August Reinsch.
Dodge City.....	23.86	61	-9	.87	32.54	74	6	.08	W. H. Clendenon, U. S. A.
McPherson.....	.....	.....	.....	1.50	.....	.....	.....	.....	M. P. Simpson.

STATIONS.	MARCH, 1879.				APRIL, 1879.				NAMES OF REPORTERS.
	Mean temperature of month...	Max. temperature of month...	Min. temperature of month...	Rainfall for month.....	Mean temperature of month...	Max. temperature of month...	Min. temperature of month...	Rainfall for month.....	
Lawrence.....	48.22°	87°	11°	.37	56.40°	84°	20°	4.18	F. H. Snow.
Leavenworth.....	46.42	84	9	.32	55.37	83	19.50	3.57	Samuel W. Rhode, U. S. A.
Manhattan.....	46.64	85	10	.02	55.70	78	18	3.21	G. H. Failyer.
Independence.....	51.50	86	16	.85	58.70	90	26	4.76	J. M. Altaffer.
Great Bend.....	47.61	90	10	.05	57.03	86	21	4.85	B. B. Smyth.
Salina.....	52.00	92	12	.30	59.00	88	19	4.62	Wm. Pettes.
Gaylord.....	.....	.....	.....	.....	.....	.....	.....	3.67	H. C. Sunderland.
Osborne.....	46.00	89	13	.....	55.96	85	20	4.02	R. B. Foster.
Kinsley.....	.....	.....	.....	.....	.....	.....	.....	.87	J. A. Walker.
Fort Wallace.....	42.58	86	12	.....	53.76	86	25	.75	Chas. F. Swallow, U. S. A.
Creswell.....	44.30	90	11	.15	53.18	84	24	6.49	Chas. E. Whitney,
Cedar Vale.....	.....	.....	.....	.....	61.68	90	26	4.98	August Reinsch.
Dodge City.....	47.72	.....	.....	.17	56.97	87	19	.40	W. H. Clendenon, U. S. A.
Fort Hays.....	.....	.....	.....	.....	60.79	83	.....	2.80	T. A. Davis.
McPherson.....	.....	.....	.....	.....	.....	.....	.....	4.25	M. P. Simpson.

STATIONS.	MAY, 1879.				JUNE, 1879.				NAMES OF REPORTERS.
	Mean temperature of month...	Max. temperature of month...	Min. temperature of month...	Rainfall for month.....	Mean temperature of month...	Max. temperature of month...	Min. temperature of month...	Rainfall for month.....	
Lawrence.....	69.50°	93°	43°	1.60	73.22°	97°	45°	7.14	F. H. Snow.
Leavenworth.....	68.96	92	41	3.04	73.35	93	46	9.90	Samuel W. Rhode, U. S. A.
Manhattan.....	68.57	95	44	1.79	72.80	93	52	8.48	G. H. Failyer.
Independence.....	69.30	91	51	.92	76.90	102	50	3.54	J. M. Altaffer.
Great Bend.....	68.53	98	40	.31	77.00	100	33	2.65	B. B. Smyth.
Salina.....	71.00	103	39	1.38	75.00	103	43	8.79	Wm. Pettes.
Gaylord.....	.....	.....	.....	1.58	.....	.....	.....	4.17	H. C. Sunderland.
Osborne.....	67.82	96	50	2.65	73.60	94	48	3.83	R. B. Foster.
Kinsley.....	.....	.....	.....	2.00	.....	.....	.....	3.65	J. A. Walker.
Fort Wallace.....	69.17	100	42	2.44	77.48	108	52	1.08	Chas. F. Swallow, U. S. A.
Creswell.....	66.22	95	46	.84	75.40	100	52	6.93	Chas. E. Whitney.
Cedar Vale.....	72.99	92	52	1.48	77.93	102	53	6.37	August Reinsch.
Dodge City.....	68.09	98	42	.90	76.00	.....	.....	4.40	W. H. Clendenon, U. S. A.
Fort Hays.....	69.89	100	25	.50	78.34	100	20	2.60	T. A. Davis.
McPherson.....	.....	.....	.....	1.70	.....	.....	.....	7.00	M. P. Simpson.

METEOROLOGICAL—Continued.

Stations.	July, 1879.				August, 1879.				Names of Reporters.
	Mean temperature of month...	*Max. temperature of month...*	*Min. temperature of month...*	*Rainfall for month .....*	*Mean temperature of month...*	*Max. temperature of month...*	*Min. temperature of month...*	*Rainfall for month .....*	
Lawrence	79.14°	97°	62°	3.66	75.73°	99°	49°	1.03	F. H. Snow.
Leavenworth	79.85	97	61	4.99	77.70	96	52	.18	Samuel W. Rhode, U. S. A.
Manhattan	79.20	98	67	4.91	77.56	99	61	1.61	G. H. Failyer.
Independence	85.90	104	70	3.26	77.30	104	58	4.12	J. M. Altaffer.
Great Bend	80.00	98	62	6.79	77.50	101	53	1.65	B. B. Smyth.
Salina	90.00	103	62	6.72	79.00	107	58	2.10	Wm. Pettes.
Gaylord	.....	.....	.....	4.07	.....	.....	.....	.23	H. C. Sunderland.
Osborne	79.57	100	63	3.37	77.74	103	60	1.90	R. B. Foster.
Kinsley	.....	.....	.....	2.31	.....	.....	.....	3.37	J. A. Walker.
Fort Wallace	80.92	108	59	7.01	75.98	105	56	2.24	Chas. F. Swallow, U. S. A.
Creswell	80.80	100	67	7.88	75.23	101	62	2.10	Chas. E. Whitney.
Cedar Vale	84.20	102	72	2.86	80.38	104	63	5.69	August Reinsch.
Dodge City	80.40	.....	.....	3.90	75.60	.....	.....	3.75	W. H. Clendenon, U. S. A.
Fort Hays	90.37	105	44	7.04	81.88	102	35	3.02	T. A. Davis, U. S. A.
McPherson	.....	.....	.....	6.25	.....	.....	.....	4.20	M. P. Simpson.

Stations.	September, 1879.				October, 1879.				Names of Reporters.
	Mean temperature of month...	*Max. temperature of month...*	*Min. temperature of month...*	*Rainfall for month .....*	*Mean temperature of month...*	*Max. temperature of month...*	*Min. temperature of month...*	*Rainfall for month .....*	
Lawrence	65.40°	92°	42°	3.57	60.46°	87.5°	25.5°	2.81	F. H. Snow.
Leavenworth	65.90	90	43	3.41	62.10	84.5	26.0	4.25	Samuel W. Rhode, U. S. A.
Manhattan	66.30	92	40	4.30	61.13	86.0	24.0	2.63	G. H. Failyer.
Independence	70.50	92	53	1.34	62.80	91.0	31.0	2.49	J. M. Altaffer.
Great Bend	65.25	97	32	.35	59.20	88.0	27.0	.10	B. B. Smyth.
Salina	71.00	100	42	1.95	65.00	90.0	25.0	1.80	Wm. Pettes.
Gaylord	.....	.....	.....	1.30	.....	.....	.....	.23	H. C. Sunderland.
Osborne	66.45	94	47	2.30	61.60	91.0	24.0	.15	R. B. Foster.
Kinsley	.....	.....	.....	.20	.....	.....	.....	.40	J. A. Walker.
Fort Wallace	64.15	98	38	.97	56.25	91.0	16.0	.....	Chas. F. Swallow, U. S. A.
Creswell	69.23	95	38	1.37	58.20	.....	.....	2.16	Chas. E. Whitney.
Cedar Vale	71.07	94	48	1.49	64.28	90.0	31.0	2.87	August Reinsch.
Dodge City	66.17	95	38	.80	59.50	76.7	45.5	.....	J. W. Everly, U. S. A.
Fort Hays	62.17	98	24	.30	48.79	91.0	10.0	.....	P. Boland, H. S., U. S. A.
McPherson	.....	.....	.....	1.25	.....	.....	.....	.60	M. P. Simpson.

Stations.	November, 1879.				December, 1879.				Names of Reporters.
	Mean temperature of month...	*Max. temperature of month...*	*Min. temperature of month...*	*Rainfall for month .....*	*Mean temperature of month...*	*Max. temperature of month...*	*Min. temperature of month...*	*Rainfall for month .....*	
Lawrence	44.26°	76.5°	16°	5.15	26.23°	65.5°	−9°	2.39	F. H. Snow.
Leavenworth	44.60	73.5	16	7.85	26.70	63.0	−8	2.34	Samuel W. Rhode, U. S. A.
Manhattan	49.50	70.0	13	7.83	28.75	74.0	−10	.62	G. H. Failyer.
Independence	49.40	80.0	18	3.30	32.90	64.0	−4	5.17	J. M. Altaffer.
Great Bend	40.00	76.0	14	2.00	32.00	74.0	−10	.65	B. B. Smyth.
Salina	46.00	75.0	16	4.89	28.00	79.0	−8	.35	Wm. Pettes.
Gaylord	.....	.....	.....	1.90	.....	58.0	−19	.....	H. C. Sunderland.
Osborne	41.04	78.0	17	2.77	23.16	57.0	−13	.....	R. B. Foster.
Kinsley	.....	.....	.....	.75	.....	.....	.....	.25	J. A. Walker.
Fort Wallace	37.36	77.0	8	1.26	23.39	72.0	−16	.02	Chas. F. Swallow, U. S. A.
Creswell	37.24	67.0	14	4.99	23.60	78.0	−10	1.58	Chas. E. Whitney.
Cedar Vale	47.57	80.0	15	2.43	39.38	66.0	−8	2.00	August Reinsch.
Dodge City	40.70	72.0	7	.04	25.70	70.0	−13	.12	W. B Hester, J. W. Everly.
Fort Hays	.....	.....	.....	.....	.....	.....	.....	.....	P. Boland, H. S, U. S. A.
McPherson	.....	.....	.....	4.55	.....	.....	.....	.75	M. P. Simpson.

METEOROLOGICAL — CONTINUED.

SUMMARY OF RAINFALL FOR OCTOBER, NOVEMBER AND DECEMBER, 1879.

FIRST, OR EASTERN BELT.

Stations.	Latitude	Longitude	Altitude	October	November	December	Total for three months.
Lawrence	38°58′	95°16′	884	2.81	5.15	2.39	10.35
Leavenworth	39 21	94 54	896	4.25	7.85	2.34	14.44
Manhattan	39 12	96 40	1,200	2.63	7.83	.62	11.08
Independence	37 8	95 37	800*	2.49	3.30	5.17	10.96
Cedar Vale	37 8	96 27	1,000*	2.87	2.43	2.00	7.30

SECOND, OR MIDDLE BELT.

Great Bend	38°22′	98°38′	1,845	.10	2.00	.65	2.75
Salina	39 00	98 00	1,243	1.80	4.89	.35	7.04
Gaylord	39 45	98 50	1,800	.23	1.90	.00	2.13
Osborne	39 30	98 45	2,000*	.15	2.77	.00	2.92
Kinsley	37 58	99 46	2,226	.40	.75	.25	1.40
Creswell	38 20	97 11	1,375	2.16	4.99	1.58	8.73
McPherson	38 20	99 40	1,557	.60	4.55	.75	5.90
Fort Hays	38 59	99 00	2,107	.....	.....	.....	.....

THIRD, OR WESTERN BELT.

Gaylord	39°45′	98°50′	1,800	.23	1.90	.00	2.13
Osborne	39 30	98 45	2,000*	.15	2.77	.00	2.92
Kinsley	37 58	99 46	2,226	.40	.75	.25	1.40
Fort Wallace	39 00	101 34	3,318	.00	1.26	.02	1.28
Dodge City	37 45	100 00	2,600	.00	.04	.12	.16
Fort Hays	38 59	99 00	2,107	.....	.....	.....	.....

*Estimated.

SUMMARY OF RAINFALL FOR 1879.

FIRST, OR EASTERN BELT.

Stations.	Latitude	Longitude	Altitude	January	February	March	April	May	June	July	August	September	October	November	December	Total
Lawrence	38°58′	95°16′	884	.37	.41	.37	4.18	1.60	7.14	7.14	1.03	3.57	2.81	5.15	2.39	32.68
Leavenworth	39 21	94 54	813	1.16	.54	.32	3.57	3.04	9.90	9.90	.18	3.41	4.25	7.85	2.34	41.55
Manhattan	39 12	96 40	1,200	.75	.....	.02	3.21	1.79	8.48	8.48	1.61	4.30	2.63	7.83	.62	36.15
Independen'e	37 8	95 37	800*	2.03	1.30	.85	4.76	.92	3.54	3.54	4.12	1.34	2.49	3.30	5.17	33.08
Cedar Vale	37 8	96 27	1,000*	2.12	.88	.....	4.98	1.48	6.37	6,37	5.69	1.49	2.87	2.43	2.00	33.17

SECOND, OR MIDDLE BELT.

Great Bend	38°22′	98°38′	1,845	1.07	.25	.05	4.95	.31	2.65	6.79	1.65	.35	.10	2.00	.65	20.82
Salina	39 00	98 00	1,243	1.35	.12	.30	4.62	1.38	8.79	6.72	2.10	1.95	1.80	4.89	.35	34.37
Gaylord	39 45	98 50	1,800	.75	.....	.....	3.67	1.58	4.17	4.07	.23	1.30	.23	1.90	.00	17.90
Osborne	39 30	98 45	2,000*	1.00	.10	.....	4.02	2.65	3.83	3.37	1.90	2.30	.15	2.77	.00	22.09
Kinsley	37 58	99 46	2,226	.85	.38	.....	.87	2.00	3.65	2.31	3.37	.20	.40	.75	.25	15.03
Creswell	38 20	97 11	1,375	1.55	.45	.15	6.49	.84	6.93	7.88	2.10	1.37	2.16	4.99	1.58	36.49
McPherson	38 20	99 40	1,557	1.50	.....	.....	4.25	1.70	7.00	6.25	4.20	1.25	.60	4.55	.75	32.05
Fort Hays	38 59	99 00	2,107	.....	.....	.....	2.80	.50	2.60	7.04	3.02	.30	.....	.....	.....	16.26

THIRD, OR WESTERN BELT.

Gaylord	39°45′	98°50′	1,800	.75	.....	.....	3.67	1.58	4.17	4.07	.23	1.30	.23	1.90	.00	17.90
Osborne	39 30	98 45	2,000*	1.00	.10	.....	4.02	2.65	3.83	3.37	1.90	2.30	.15	2.77	.00	22.09
Kinsley	37 58	99 46	2,226	.85	.38	.....	.87	2.00	3.65	2.31	3.37	.20	.40	.75	.25	15.03
Fort Wallace	39 00	101 34	3,318	.45	.36	.....	.75	2.44	1.08	7.01	2.24	.97	.00	1.26	.02	16.58
Dodge City	37 45	100 00	2,600	.87	.08	.17	.40	.90	4.40	3.90	3.75	.80	.00	.04	.12	15.43
Fort Hays	38 59	99 00	2,107	.....	.....	.....	2.80	.50	2.60	7.04	3.02	.30	.....	.....	.....	16.26

*Estimated.

METEOROLOGICAL—Continued.

RECAPITULATION.

Belts.	*January.....*	*February....*	*March .....*	*April .....*	*May.....*	*June.....*	*July.....*	*August .....*	*September....*	*October.....*	*November ...*	*December ...*
First, or eastern belt...	1.29	.78	.39	4.14	1.77	7.09	4.94	3.53	2.82	3.01	5.31	2.50
Second, or middle belt...	1.15	.26	.17	3.96	1.37	4.95	5.55	2.32	1.13	.78	3.12	.51
Third, or western belt...	.78	.23	.17	2.09	1.66	3.29	4.62	2.42	.98	.16	1.34	.08

METEOROLOGICAL SUMMARY FOR THE YEAR 1879.

From Observations Taken at Lawrence, Kansas, by Prof. F. H. Snow, of the Kansas State University, Meteorologist to the State Board of Agriculture.

The chief characteristics of the weather of 1879 were the high average temperature of the spring and autumn months, the long period of immunity from severe frosts, the deficient rainfall of March, May and August, the extraordinary rainfall of November, and the low percentage of cloudiness. It is worthy of note, that notwithstanding the deficiency of rain in the months above named, the crops have been abundant in all the agricultural sections of the State.

TEMPERATURE.

Mean temperature of the year, 54.67°, which is .51° above the mean of the 11 preceding years. The highest temperature was 99.5°, on August 4th; the lowest was 16° below zero, on the 4th of January—giving a yearly range of 115.5°. Mean temperature at 7 A. M., 48.61°; at 2 P. M., 63.71°; at 9 P. M., 53.18°.

Mean temperature of the winter months, 27.93°, which is 1.94° below the average winter temperature; of the spring, 58.04, which is 4.83° above the average; of the summer, 76.05°, which is .47° below the average; of the autumn, 56.71°, which is 3.90° above the average.

The coldest month of the year was January, with mean temperature 23.49°; the coldest week was January 2d to 8th, with mean temperature 3.90°; the coldest day was January 3d, with mean temperature 9.3° below zero. The mercury fell below zero thirteen times, of which ten were in January and three in December.

The warmest month was July, with mean temperature 79.14°; the warmest week was July 5th to 11th, with mean temperature 83.54°; the warmest day was July 22d, with mean temperature 86.9°. The mercury reached or exceeded 90° on forty-eight days, viz.: Four in May, twelve in June, sixteen in July, fourteen in August, and two in September.

The last light frost of spring was on April 18th, the first light frost of autumn was on October 19th, giving an interval of 184 days entirely without frost. The last severe frost of spring was on April 4th, the first severe frost of autumn was on October 24th, giving an interval of nearly seven months (203 days) without severe frost. The severe cold weather of January and the frost of April 3d were very destructive to the buds of peaches, pears and early apples in many localities, but there was generally a fair crop of small fruits and winter apples.

RAIN.

The entire amount of rain, including melted snow, was 32 68 inches, which is 2.70 inches below the average annual amount for the eleven preceding years. Either rain or snow fell on ninety days—twelve less than the average. The longest interval without rain during the growing season (March 1st to October 1st) was nineteen days, from

April 30th to May 19th. The number of thunder showers was thirty-six, of which nine were in June and one in December. There were five light hail storms.

SNOW.

The entire depth of snow was 10.35 inches, of which .85 inch fell in January, 4.50 inches in February, 2 inches in November, and 3 inches in December. The last snow of spring was on February 25th; the first snow of autumn was on November 28th.

FACE OF THE SKY.

The average cloudiness of the year was 40.01 per cent., which is 4.75 per cent. below the average. The number of clear days (less than one-third cloudy) was 179; half-clear days (from one-third to two-thirds cloudy), 114; cloudy (more than two-thirds), 72. There were 61 entirely clear and 35 entirely cloudy days. The clearest month was August, with an average cloudiness of 28.92 per cent.; the cloudiest month was December, with an average of 51.83 per cent. The mean cloudiness at 7 A. M. was 44.09 per cent.; at 2 P. M., 46.27 per cent.; at 9 P. M., 29.67 per cent.

DIRECTION OF WIND.

During the year (three observations daily) the wind was from the S. W. 272 times, N. W. 238 times, S. E. 158 times, S. 130 times, N. E. 112 times, E. 90 times, N. 71 times, W. 16 times, calm 8 times. The south winds (including southwest, south and southeast) outnumbered the north winds (including northwest, north and northeast) in the ratio of 560 to 421.

VELOCITY OF THE WIND.

The number of miles traveled by the wind during the year was 124,768, which is 14,160 miles less than the average for the past six years. This gives a mean daily velocity of 341.83 miles, and a mean hourly velocity of 14.24 miles. The highest hourly velocity was 60 miles, on February 25th and March 13th; the highest daily velocity was 960 miles, on March 8th; the highest monthly velocity was 13,787, in March. The three windiest months were March, November and December; the three calmest months were June, July and August. The average hourly velocity at 7 A. M. was 12.78 miles; at 2 P. M., 16.39 miles; at 9 P. M., 14.03 miles.

BAROMETER.

Mean height of barometer column, 29.127 inches; at 7 A. M., 29.150 in.; at 2 P. M., 29.103 in.; at 9 P. M., 29.126 in.; maximum, 29.745 in., on January 3d; minimum, 28.534 in., on December 28th; yearly range, 1.211 inches. The highest monthly mean was 29.253 in., in January; the lowest was 29.024, in May. The barometer observations are corrected for temperature and instrumental error.

RELATIVE HUMIDITY.

The average atmospheric humidity for the year was 67.13; at 7 A. M., 77.86; at 2 P. M., 50.11; at 9 P. M., 73.41. The dampest month was January — mean humidity 76; the driest month was March — mean humidity 56.1. There were ten fogs during the year. The lowest humidity for any single observation was 12.3, at 2 P. M. on March 9th — less than one-eighth of saturation.

[In presenting this report, the writer desires to acknowledge his indebtedness to Prof. H. S. S. Smith for taking the observations during seven weeks' absence in the summer vacation.]

EGYPTIAN CORN, OR PAMPAS RICE.

Much attention has been called to the new grain known by the above names, and also sometimes called "Rice Corn," especially in the western counties of the State; and from the reports received, it would seem to be of much value to farmers, as a crop that will yield well in very dry seasons. Herewith will be found extracts from the reports of the regular correspondents of this office, and also some statements from persons who have experimented with it. Reports relative to it have been received from twenty-three counties.

In Barton county, small quantities were raised. "In some cases it was ground into meal for table use, and made palatable food. It is as sure a crop as sorghum."

A correspondent in Crawford county says some little was raised there, but not enough to give any satisfactory result.

From Dickinson, one writes that "rice corn was raised here in small quantities a few years ago. It stood drouth as well as broom corn, and perfected its seed." Mr. Abram Baer, of Abilene, says: "We have raised rice corn for several years. It grows very rank and yields abundantly, with little labor."

In Edwards county, several parties raised it this season. One account says: "It seems to stand drouth better than Indian corn; is excellent feed for cattle and horses; has not proved so good for hogs." Some who have tried it for food say it is excellent for "cakes." "It produces a fair crop when it is so dry that Indian corn withers up." S. W. Boynton, writing from Kinsley, says: "Last Spring I planted all the rice corn I could get in the local market; planted with a common hand corn-planter, 4x4 feet, on forty acres of sod, a light sandy soil; gophers destroyed about half of it. It received no further attention until harvest, when it was cut up like ordinary field corn, the heads cut off and threshed in a machine, yielding over 300 bushels. Millet, Irish and sweet potatoes, melons, pumpkins and squashes, planted by the side of this corn, failed almost entirely on account of the extreme drouth. Under similar circumstances, Indian corn would not have produced a 'nubbin.' After cutting, a new, rank growth sprang up from the roots, and if the season had given us an average rainfall, I could have got two good crops from the same planting. . . . It should receive the same cultivation as common corn, and I believe will produce from 50 to 100 bushels. I have fed this corn to all kinds of stock, and believe it as good as Indian corn. For table use, boiled and eaten with milk, or ground and made into bread, etc., it is at least 100 per cent. better than common corn. I shall plant a larger crop this year than last."

Mr. J. W. Edwards, of Offerle, writes: "I planted about four acres last May on fresh-broken sod. Part came up soon after planting, but most of it did not come up till the last of June. Weather was very hot and dry during August and September; but when other crops began to wither and die, to my surprise the Egyptian corn seemed to grow all the more rapidly, and continued to until the last of September, when I harvested a good crop. I have fed it to hogs, horses, cows, and chickens, and all seem to relish it, and to do as well as on Indian corn. It can be used as an article of diet in various ways. My opinion is, it will prove a valuable crop to the western part of the State, and to all places that are subject to drouth. The farmers here will plant it generally next season in place of corn."

Mr. E. Bartlett, of Kinsley, says: "Planted 8 acres of rice corn about May 5th; cul-

tivated it only once; season so dry that other crops totally failed; harvested a little over 20 bushels per acre. Use it for horse and hog feed, and consider it better than Indian corn. Stands drouth equal to sorghum."

Mr. George W. Taylor, of Offerle, writes: "Planted 2 acres of rice corn last season; hot winds did not affect it; threshed about 18 bushels to the acre; think it will turn off in good seasons 30 or 40 bushels. It is splendid feed for stock, and also makes very nice meal. Think it just the crop farmers need; shall plant 15 acres this season."

Charles E. Willets, Kinsley, says: "Rice corn was planted June 10, 1879; treated in all respects as Indian corn. Was very dry when planted, yet it came up in due time without rain. Fed the heads to stock, all eating it with avidity. Past season was excessively dry in this section, but all rice cornfields yielded much better than any other grain. If mixed with an equal part of wheat flour, it makes most delicious bread. Consider it the most valuable grain yet introduced for a dry climate."

In Ellis county this grain matured where corn failed in consequence of the drouth. "It is good food for man and beast," says one report.

J. M. Post, of Hays City, writes that he "planted three acres on sod. Have fed the heads to cattle, and think they do better on it than other corn; have also fed it to fowls, and they like it much. Have used it on the table, cooked in various ways, and find it good. Believe it will make a superior quality of meal."

A reporter in Ellsworth county writes that "it has been planted in small quantities, and is said to have done well."

From Ford county the report is, that the "rice corn stood the drouth better than Indian corn. It is used for all purposes that common corn is. The yield was from 15 to 40 bushels per acre. Large breadths will be planted in this county this season."

J. S. Quick, Speareville, says: "Think it excellent food for man and beast; will mature a crop when no other grain will. Those who tried it last year are well pleased, and very many will plant it this season."

In Harvey county, correspondents say that "a little was raised," but no data are given.

In Jefferson county it has been cultivated to a limited extent. The reporter says "it stands the drouth well."

In Kingman, rice corn was grown by a number of persons in considerable quantities. It is reported as being "valuable for both food and fuel. Stands the dry weather well."

In Labette, a correspondent says: "That a small quantity was grown in 1877 as an experiment. It was used by some as a substitute for hominy, and found to be very palatable."

From Lyon county, a correspondent writes: "I tried some of this grain a few years ago with success. Found it very prolific and as hardy as sorghum, standing drouth very well."

In both Marion and Mitchell counties it is reported that small crops were raised last season. C. H. Stolp writes from Peabody, that "it is better to raise rice corn for feeding stock than oats, as it is more productive."

In Norton county considerable was raised last season, the result being very satisfactory. One report says those who have tried it "claim that a bushel will make more flour than a bushel of wheat," and "very many farmers will plant rice corn the coming season."

From Osborne county, one correspondent writes: "There was some rice corn raised here this season. It stands drouth well. Think it will yield as much per acre as common corn." Another correspondent from the same county says: "I have seen some of this corn growing. Think it a great humbug."

In Pawnee county, says one report, "a great deal was raised. On well-cultivated ground it threshed 40 bushels; on sod and poorly-cultivated ground, 10 to 20 bushels.

It stood drouth effectually, and made a fair crop where corn burned up." Another writes: "Nearly every farmer had a small field of Egyptian corn. It yielded about 25 bushels per acre, and stood the drouth much better than Indian corn." Still another writes: "I have raised it (Egyptian corn) for three years. It is an excellent feed for all kinds of stock. Am feeding it to my horses and hogs, and believe that three pecks is better than a bushel of the Indian corn raised here. It will stand the drouth better than Indian corn. Thirty or forty bushels is a good yield. Think it does better on sod than on old ground."

H. F. Miller, writing from Garfield, says: "Raised some Egyptian corn the past season; planted it on sod, middle of June; had very little rain till it was gathered. Corn planted alongside dried up. Think it will yield most on sod in a dry season. Can be planted a little closer than Indian corn. Three bushels of heads cut close will shell one bushel of corn; worms do not seem to trouble it. Fattens hogs and other stock quite as soon as Indian corn. Makes a splendid meal or flour for family use; and the stalks make a good fuel, as they are more lasting than Indian corn-stalks."

From Reno county a correspondent writes: "It has been grown under the name of 'rice corn' in small quantities. Seems to stand the drouth as well as sorghum and broom corn; claimed to do well on old ground, but not on sod."

Hon. D. H. Waite writes from Larned: "I have raised the Egyptian or rice corn for two years past. The first year was an experiment, but the result was satisfactory, and this season planted twelve acres, but the chinch-bugs destroyed it. Some of my neighbors were quite successful with rice corn this year. It is quite prolific, and is best sown in drills, with a corn planter, not too thick. The grain is small, white color, and round. Fowls, hogs and cattle are fond of it. When ground into flour it makes good pancakes. Drouth does not seem to affect it, as it holds its color when Indian corn wilts. The stalks are worthless for fodder, though cattle eat it some before it ears. I consider it a valuable crop for the western part of the State."

From Rooks county a correspondent writes: "About the 20th of May, I planted 3¼ acres on newly-broken sod; October 15th gathered the crop, and threshed out 35 bushels. Have had several bushels ground into meal, finding it of excellent quality and in many respects superior to corn. It supplies the place of hominy perfectly; is an excellent feed for all kinds of animals. Think it will stand two or three times the drouth that Indian corn will; is beyond a doubt grasshopper and worm-proof. Whenever you plant rice corn you are sure of a crop. Many small patches were planted in various parts of the county this season with good results, and now that it has become known as one of our most valuable agricultural products, a large area will be planted next season; one man, I know, will plant seventy-five acres. A bushel of seed will plant fifteen or twenty acres. It is pure white, and weighs sixty pounds to the bushel."

From Smith county, the report comes that "some little was raised; stands the drouth well; will fill when Indian corn would fail. Is considered of little value except to feed poultry."

In Sumner county, the report says: "Egyptian corn was raised in small patches. It stands the drouth as well as sorghum. Is used as a substitute for rice in soup."

In Buffalo county, "it is considered a valuable crop."

In Meade, "small patches were raised, entirely on sod. Stands drouth 100 per cent. better than Indian corn."

In Stafford county, the reporter says considerable quantities were raised, but gives no particulars as to its value for a field crop.

D. C. Terry, writing from Norwalk, Kingman county, says. "I have raised rice corn for two years. It is superior to hominy, and a good substitute for beans."

H. White, Kingman: "I believe rice corn is a sure crop, even in very dry seasons; it is very good feed for cattle and hogs; for family use we find it very palatable; when ground, is equal to corn starch."

John Bull, of Mason, Buffalo county, says: "I raised my first crop of rice corn the past season; found it would stand drouth better than most other crops, maturing large, well-filled heads. Some of the heads have shelled out a pint of the grain. My crop was raised on sod. I have tried it as feed for cattle, horses and poultry, and find it much relished by all of them; it fattens hogs well, and the pork is excellent; horses will pick the heads from rice corn and eat them first. I think it is worth more for horse feed than either Indian corn or oats, as it is very rich, and yet not heating. It is very palatable boiled and served like rice. On old ground, it should be planted in rows as near together as can be cultivated, dropping one or two seeds six to ten inches apart; the ground should be thoroughly prepared and well harrowed; cultivate as soon as you can follow the rows, with a harrow-tooth cultivator, keeping the ground stirred often till the heads begin to come out."

Samuel P. Wood, postmaster at Mason, raised a crop of rice corn last season, on sod. He says: "I think on old ground, planted and cultivated like other corn, it will yield fifty to seventy bushels per acre. It makes good feed for horses and hogs, and cattle do well on it. It is good cooked as you would rice. Some are using meal from it, and say it makes good bread and griddle-cakes."

W. McCreary writes from Offerle: I planted about eight acres of rice corn last year —some in April, and some as late as June. It all matured well but a small portion of the last planting. Fed four hogs exclusively on it last fall, and find it makes pork equal to common corn. All kinds of stock relish it well. It appears to be unaffected by drouth. I have so much faith in rice corn that I intend to plant it in place of barley and oats."

Lyman C. Smith, of Smith Center, says: "I have raised rice corn in small quantities for the last four years; as nearly as I can judge, it will yield from forty to sixty bushels per acre; have used it to feed all kinds of stock, and it is liked by all; we think it an excellent substitute for buckwheat. It does well planted on sod. Planting in hills one foot one way and three the other, three to five kernels in a hill, is the best way; if too close, the heads will be small."

So far as reports have been made of this new cereal, they have been mainly favorable; further experiment, however, is needed to determine its value as a product in this State. As will be seen by the above, there has been but little trial of it except in the western portion of the State, and the result of the coming year's experiments will be watched with much interest.

CHEMICAL ANALYSIS OF RICE CORN.

To the State Board of Agriculture—GENTLEMEN: As requested by your former Secretary, the late Hon. Alfred Gray, I have submitted to chemical analysis a sample of meal made from the so-called "rice corn."

The corn from which the meal examined was made, was raised the past season in Pawnee county, Kansas. The meal resembles that of Indian corn, and in color is intermediate between the yellow and the white varieties of the latter.

Before analysis, the sample was air-dried for several weeks in a warm room, a fact that may account for the small amount of moisture present, as compared with the amounts given in the analysis of other grains, which are quoted below. In all probability these latter results were obtained with freshly-ground seeds.

In order to best exhibit the relation of rice corn to other grains as an article of food,

I have arranged the following table, giving the percentage composition of the more common cereals:

	1	2	3	4	5	6	7	8
Moisture	7.18	11.5—13.2	13.5	13.89	12.44	12.28	13.85	13.61
Starch	68.62	50.1—54.8	64.5	62.69	64.36	62.20	56.41	45.78
Fat	4.61	4.4— 4.7	6.7	4.36	1.75	2.28	2.17	4.20
Cellulose	3.00	14.9—20.4	4.0	4.19	2.65	4.30	3.93	16.21
Dextrine and sugar	2.64	2.3— 2.9	.....	2.14	3.35	4.55	6.84	1.57
Albuminoids	11.12	8.7— 8.9	9.9	10.50	9.86	11.14	12.44	12.66
Extractive matter	1.18	.....	.....	1.43	3.94	1.64	3.09	1.42
Ash	1.65	1.6— 1.8	1.4	1.48	1.51	1.48	1.45	3.56

NOTE.—The great variation in percentage of cellulose is due, in part at least, to the fact that the methods of determining this substance are not quite reliable.

No. 1.—Rice corn, Pawnee county, Kansas.....Patrick, Analyst.
*No. 2.—Indian corn, 4 samples, American and Russian.....Poisson, "
No. 3.—Indian corn (probably German).....Poggiale, "
†No. 4.—Indian corn.....Pellitz, "
†No. 5.—Prince Albert wheat.....Pellitz, "
†No. 6.—White wheat, from Flanders.....Pellitz, "
†No. 7.—Rye.....Pellitz, "
†No. 8.—Oats.....Pellitz, "

From these figures it will be seen that rice corn stands *well* as an article of food. In its percentage of "fat formers" or "heat producers," *i. e.*, starch, fat, dextrine and sugar, it compares very favorably with all the grains mentioned, while in its contents of albuminoids—the "flesh formers" so-called—it surpasses all the Indian corns of which I find analyses, and takes rank with wheat, rye and oats.

The small percentage of cellulose or woody fiber, is also remarkable, and must be considered an item in favor of rice corn, since cellulose is *almost* entirely non-nutritious.

In conclusion, I may say that I have used this meal somewhat at my own table, and can certify that it makes excellent corn-bread; more palatable to my taste than that from Indian corn. I am, very respectfully, yours, G. E. PATRICK.

CHEMICAL LABORATORY, UNIVERSITY OF KANSAS, February 1, 1880.

*Quoted from Watts's Dictionary of Chemistry, vol. I.
†Quoted from Fresenin's Zeitschrift für Analyt. Chemie, 1872.

PEARL MILLET.

Some interest has been manifested in this plant, and a request was made to correspondents to give this office such information as might be obtained in their several localities, so that intelligent conclusions might be drawn as to its value as a forage plant in this State. Following are the main points of the reports as received for the quarter ending December 31, 1879:

Allen County.—"Raised only as an experiment; as a forage plant it is not considered a paying crop; quality of the fodder is not superior to corn or cane leaves." "It has been raised only in small patches; planted in hills and cultivated as corn; stalks grew from nine to thirteen feet high, and produced a large crop." J. H. Spicer, of Geneva, writes: "As a forage crop it is very prolific; one seed in a hill, hills four or five feet apart each way, will produce from twenty-five to forty tons green feed per acre; should be cultivated same as corn; do not consider it as good green fodder as corn." Henry M. Stowe, Iola, says: "Planted millet May 7, on ground prepared as for corn; drilled in part and planted part, one seed in a hill four feet apart; the planted portion was much the best; some of the crop was cut two or three times; most of that cut twice threw out heads, but did not ripen; all kinds of animals are very fond of it."

Atchison County.—"Know of a field of millet which was a heavy crop; have no report of its value for forage."

Barbour County.—"A little pearl millet has been raised in this county as an experiment, which has been very encouraging."

Barton County.—"Those who know anything about pearl millet speak well of it; a large breadth will be sown here next season." C. O. Meacham, of Ellinwood, writes: "I have raised pearl millet three years, and am satisfied with the result. I consider it by far the most profitable hay crop we can raise; and although I can cut all the fine blue-joint hay I want on my own place, shall sow this millet for my hay entirely this season, as I find it much better for my calves and horses. I prefer cutting before ripe, when wanted for feed."

Chase County.—"A small quantity of pearl millet was sown in a garden; it grew well, making as many as sixty full-developed stalks to a single seed. But as a forage plant it was unsatisfactory. . . . The stalks matured a very hard, woody fiber, almost destitute of sweetness. So far as tried, stock prefer stalks and blades of corn to this. It will be thoroughly tried here next season. It stood dry weather like sorghum or broom corn." Another account says: "Pearl millet has been successfully grown by several of our neighbors, who praise it highly, on account of the enormous yield of forage and its ability to stand continued drouth."

Cherokee County.—L. T. Stowell writes from Baxter Springs: "I sowed in drills April 23, drills same distance apart as corn, and cultivated it like corn. When the blades were about five feet high—June 10—I cut the growth of one seed, some twenty-five or thirty stalks, and it weighed, green, 12 lbs. 7 oz. Have yet found no way of getting the seed from the hull or chaff. I think it will prove by far the most desirable forage plant for stock I have seen in Kansas."

Coffey County.—J. P. Saueressig, Strawn, writes: "Sowed last spring one quart pearl millet seed; it grew from six to ten feet high; heads from six to fifteen inches long;

can be mowed two or three times each season; think it will make from five to seven tons of hay or fodder per acre."

Dickinson County.—The only report received says: "Some little raised; did not do well."

Ellsworth County.—Mr. Lewis Brubaker, of Venango, writes: "Planted a few hills in May last, one or two seeds to a hill; thirty-five or forty stalks sprouted from one seed; most of them grew eight to ten feet high, and full leaved; some seed heads eleven inches long; think the proper way is to sow broadcast or drill, and cut when three or four feet high. Believe it will be a good forage crop."

Harper County.—A correspondent says: "Only know of one person raising pearl millet, and have no particulars except that he likes it."

Jefferson County.—Our report says: "Does well; yields about four tons per acre; stands drouth better than common millet."

Johnson County.—One correspondent writes: "Raised by several persons; success good as compared with corn; stands drouth well; cattle eat the stalks cleaner than corn fodder; we now think it a good thing, and shall give it further trial."

Kingman County.—J. Weiler raised a small lot, but no report of its value has been received.

Labette County.—"Some little planted as an experiment, but with what success is not known."

Lyon County.—Pearl millet "has been raised by a few, and found to yield a very abundant crop, more so than millet, and endures dry weather. Cattle are very fond of it."

Marshall County.—A correspondent writes: "Tried a small patch the past year, with fair success; but further trial will be necessary to establish its value as a forage crop. Think it will not supplant corn as a forage crop."

Neosho County.—Mr. D. H. Cave writes: "Planted about half an acre; only about fifty hills came up; thinned it to one stalk to the hill; all kinds of stock eat it greedily while green; it can be cut off four or five times while growing, and sprouts up again; can't recommend it except to feed green."

Osage County.—"Its yield is immense; seems to stand drouth; think it will be valuable as a fodder plant." Another correspondent writes: "Grown with success for several years past, and considered fifty per cent. better than corn fodder; will stand dry weather much better, and can be raised either in drills or cultivated like corn."

Osborne County.—"Is raised and highly recommended by stock men on the 'divide,' in the buffalo-grass region."

Pawnee County.—Mr. L. C. Salmans planted a few rows of pearl millet last season, he writes: "The fodder seemed to be reasonably good, though not better than Indian corn in quality, but the yield was double; think it will do best drilled or sowed broadcast and mowed when three or four feet high; it will make better fodder and perhaps make two crops by springing up from the stubble; it appears to stand dry weather better than the other millet or corn."

Phillips County.—"Pearl millet was planted as an experiment, and the result was surprising; it made an astonishing growth; cut several times during the season, growing more rapidly each time; best fodder crop ever seen; stock eat it up clean, dry or green, in preference to anything else; cannot yet say how it will stand drouth; seems superior to corn as fodder, and yields four or five times as much per acre."

Reno County.—"A small patch was tried this year, but it did not grow as luxuriantly as represented, nor was the aggregate yield as large. It seemed to stand the drouth well; stools out and roots much more than sorghum; suspect it will exhaust the soil and stubble be hard to plow up." Another account says: "Tried a small patch this year; grew well; hardly able to determine its value as a forage plant."

Sedgwick County.— "Not considered good," is the sole notice of pearl millet.

Smith County.— "Very little raised; considered too 'stalky' for feed; and while yielding more bulk per acre would not feed further than ordinary millet, on account of waste."

Sumner County.— "A small patch only raised; believed to be valuable; chinch-bugs did not injure it as they did corn." Another correspondent says: "It is considered better than corn fodder for stock; success has always attended its cultivation; stands dry weather better than corn."

Wilson County.— "Some parties have tried pearl millet the past two years, and brand it as a humbug."

Wyandotte County.— "Worth double for fodder compared with corn; stands drouth better than corn."

Reports from correspondents in relation to pearl millet have not been very satisfactory. Very many seem to have confounded this grain with the common, or what is usually known as German millet. The reports, however, are given just as received, where they relate solely to pearl millet, and are to be taken as they seem to be, merely experimental.

SHEEP HUSBANDRY IN KANSAS.

The accumulated evidence of the success attending intelligent sheep husbandry in Kansas, forms one of the most interesting and valuable chapters ever presented to the people by this Board. The almost unanimous testimony from every county in the State, given by those practically engaged in sheep farming, as to the peculiar adaptability of Kansas for sheep husbandry, would seem to leave no room for doubt that the growth of this interest in the future will be more rapid than in the past.

The number of sheep returned by the Department of Agriculture at Washington, for Kansas, in 1870, was 109,088, with a valuation of $230,175.68. The assessors' returns to this Department for 1875, show the number as 106,224, a decrease of 2,864 in five years, while the valuation was increased $17,326 24—. The increase in number and valuation for each year from 1875 to 1879, as reported to this Department, are as follows:

1876.—Number, 143,962; increase	37,738
Valuation, $351,706.90; increase	$4,204 98
1877.—Number, 205,770; increase	61,808
Valuation, $555,579; increase	$203,873
1878.—Number, 243,760; increase	38,090
Valuation, $731,280; increase	$175,701
1879.—Number, 311,862; increase	68,102
Valuation, $1,091,517; increase	$360,237
Increase in number from 1870 to 1879	202,774
Increase in valuation from 1870 to 1879	$861,341 32

Time may develop the fact that for sheep growing, Kansas may be divided into two or three belts, by lines drawn north and south, thus forming the eastern, middle and western belts: the first, or eastern one, more especially adapted to the larger mutton sheep, the middle to the medium or mixed breeds grown for wool and mutton both, and the western belt to the larger flocks of fine-wool sheep, made up of the Merino and its crosses on the common sheep. The smaller farms, with less free range, and the nearer markets for mutton, point to the possibility of the larger breeds being more profitable in the eastern portion of the State. Just what influence the increased altitude of the western portion of the State will have upon the health of flocks, cannot, with the limited experience of a few years, be yet determined. It is safe, however, to say that the general truth developed by the experience of Kansas breeders is, that the high, well-drained prairies of the State have been found, for obvious reasons, the healthiest. It will be seen that the breeders from the extreme western counties report their flocks more than ordinarily free from disease. The marked improvement in the weight of both the fleece and the carcass in Kansas in flocks which have been removed from other States are points worthy of special notice. The almost unlimited range to be found in the western portion of the State presents advantages for extensive flocks, and opens a field for the investment of surplus capital which will not long be neglected. In the reports of correspondents for all the organized counties of the State, numbering 229 breeders, we have their practical experience and suggestions, from which we condense the following facts: The longest time which any breeder has engaged in the business in Kansas is 23 years; the average length of time of the entire number is five years. The largest flock is 7,000; the average number in a flock is 593. Fifteen correspondents express their preference for coarse-wool sheep and crosses, for wool; ninety-one prefer medium-wool sheep; and sixty-five give the preference to fine-wool sheep. Fifty-nine breeders prefer coarse-wool sheep

MERINO RAM.

for mutton; fifty-one prefer mediums for mutton, and eighteen, fine-wool. The average annual increase in the flocks of coarse-wool sheep is 83 per cent., in mediums 75 per cent., in fine-wools 82 per cent. Average price of sheep, ewes $2.90, wethers $3. Average price received for wool clip of 1879, coarse wool 21⅔ cents, medium wool 21½ cents, fine wool 21¾ cents. Best age to sell ewes 6 years, wethers 5 years, as given by a majority of the correspondents. Annual loss from all causes averages 5 per cent.

The illustrations of various breeds of sheep, and Angora and Cashmere goats, are introduced, together with short descriptions and histories of the different animals, to enable the general reader more thoroughly to understand the relations of the various breeds to each other. Keeping in view the characteristics of the breeds presented herewith, the reader, although he may not be familiar with the breeding and care of sheep, will be enabled to judge intelligently of the experiments and methods presented in these pages from the practical sheep breeders of Kansas.

DESCRIPTION AND HISTORY.

THE MERINO.

The Merino is a fine white-wool sheep, of a dark, greasy appearance, medium size, snug build, body shortish, round and thick, good quarters, legs short, stout and woolly, ears short, cheeks and forehead to the eyes thickly covered with wool, skin wrinkled or in folds, weight 100 to 180 lbs., fleece 12 to 29 lbs., wool two to three inches long. The rams have curled and convoluted horns. It is classed as a wool sheep.

History.—The Merino originated in Spain, in the first century. It is a cross between the Tarantine, of southern Italy, and the best native sheep of Spain, and was introduced into the United States in 1800. In Spain, this breed was driven from the South northward every spring, 400 miles, and back in the fall; each journey was made in six weeks. The name, Merino, is a modified form of the name of the special officer in charge of this highly-valued breed.

THE SOUTHDOWN.

The Southdown is a whitish, coarse, short-wool, hornless sheep, medium size, fine form, well-balanced proportions, hind-quarters square and full, thighs massive, breast broad, fore-quarters well developed, legs short and trim, face and legs dark-brown or black and without wool. Yearlings yield 75 to 80 lbs., dressed weight. Average weight of fleece about 6 lbs. Its wool makes flannel and soft goods. It is classed as a mutton sheep.

History.—The Southdown is an English breed, developed by carefully inbreeding common sheep inhabiting the hilly portions of southern England from its earliest history. The improvement began about one hundred years ago. The name of the breed is taken from the low chalk hills or downs of southern England, where it was developed.

THE HAMPSHIREDOWN.

The Hampshiredown is a whitish, coarse, medium-wool, hornless sheep, good size, much resembling the Southdown, but larger, and with longer and coarser wool. Yearlings weigh 80 to 100 lbs., and yield a fleece of 6 to 7 lbs. It is a mutton sheep.

History.—The Hampshiredown originated in England about seventy years ago, in a cross between a pure Southdown and a white-faced horned sheep of that district, from the "downs" of which section it derives its name.

THE LEICESTER.

The Leicester is a white, medium, coarse, long-wool sheep, of large size, square and angular build, long, slender, clean head and ears. Eyes and facial bones about the eyes

GROUP OF MERINO EWE TEGS.

prominent, hind-quarters tapering toward the tail, legs good length, slender and clean. Yearlings dress 100 lbs. and at two years 150 lbs. Full grown have reached 380 lbs., live weight. Average weight of fleece 7 to 8 lbs. It is a mutton sheep.

History.—This breed was developed in England over 100 years ago by a Mr. Beekewell, from the common sheep of Leicestershire, from which district it derives its name. The method of breeding was kept secret. They were introduced into the United States by General Washington.

THE LINCOLN.

The Lincoln is a white, coarse, long-wool, hornless sheep, surpassing all other breeds in weight of body and length of wool. It has dressed 96¼ lbs. to the quarter. Two-year-olds dress 120 to 160 lbs. and yield a fleece of 10 to 14 lbs. washed wool, measuring 9 inches and over in length—used for worsteds. It is a mutton sheep.

History.—The Lincoln originated in England less than 100 years ago, as a cross between a Leicester and a common breed now extinct, but then inhabiting the low, alluvial and rich herbaged flats of Lincolnshire, from which it takes its name and where it best flourishes.

THE COTSWOLD.

The Cotswold is a white, coarse, long-wool, hornless sheep, large size, long bodied, broadening from shoulders to rump, head well tapered from ears to nose, finely proportioned, and covered to between the eyes with a thick forelock of wool, ears long and well formed, legs good length, well shaped and clean. Weight of yearlings about 120 lbs.; full grown have dressed 344 lbs. Weight of fleece about 8 lbs. Wool sometimes nine inches long, and widely used for woolens. It is a mutton and wool sheep.

History.—The Cotswold originated in England, less than one hundred years ago, as a cross between a Leicester and descendants of common sheep imported from Spain in the 12th century. Its name comes from the cots or huts built in the hilly wolds or fields where it was developed and established.

OXFORDDOWN.

The Oxforddown is a whitish, coarse, long-wool, hornless sheep of medium size, round bodied and short legged, face and legs dark, a Cotswold-shaped head and thick-set and somewhat curly fleece of 8 to 9 lbs. of wool 5 to 7 inches long, used for worsteds. At 14 months it dresses 80 to 88 lbs. A mutton and wool sheep.

History.—The Oxforddown originated in Oxfordshire, England, since 1830, whence its name. It is a cross between a Cotswold ram and a Hampshiredown ewe, followed by careful inbreeding.

CHEVIOT.

The Cheviot is a white, coarse, medium-wool, hornless mountain sheep of medium size, long bodied, hind-quarters and saddle full and heavy, fore-quarters light, face strong featured and massive, head and legs generally white, but sometimes dun or speckled. At 3 years they dress 80 lbs. The fleece yields about 5 lbs., and is used for Scotch tweed and cheviot cloth. It is a mutton and wool sheep.

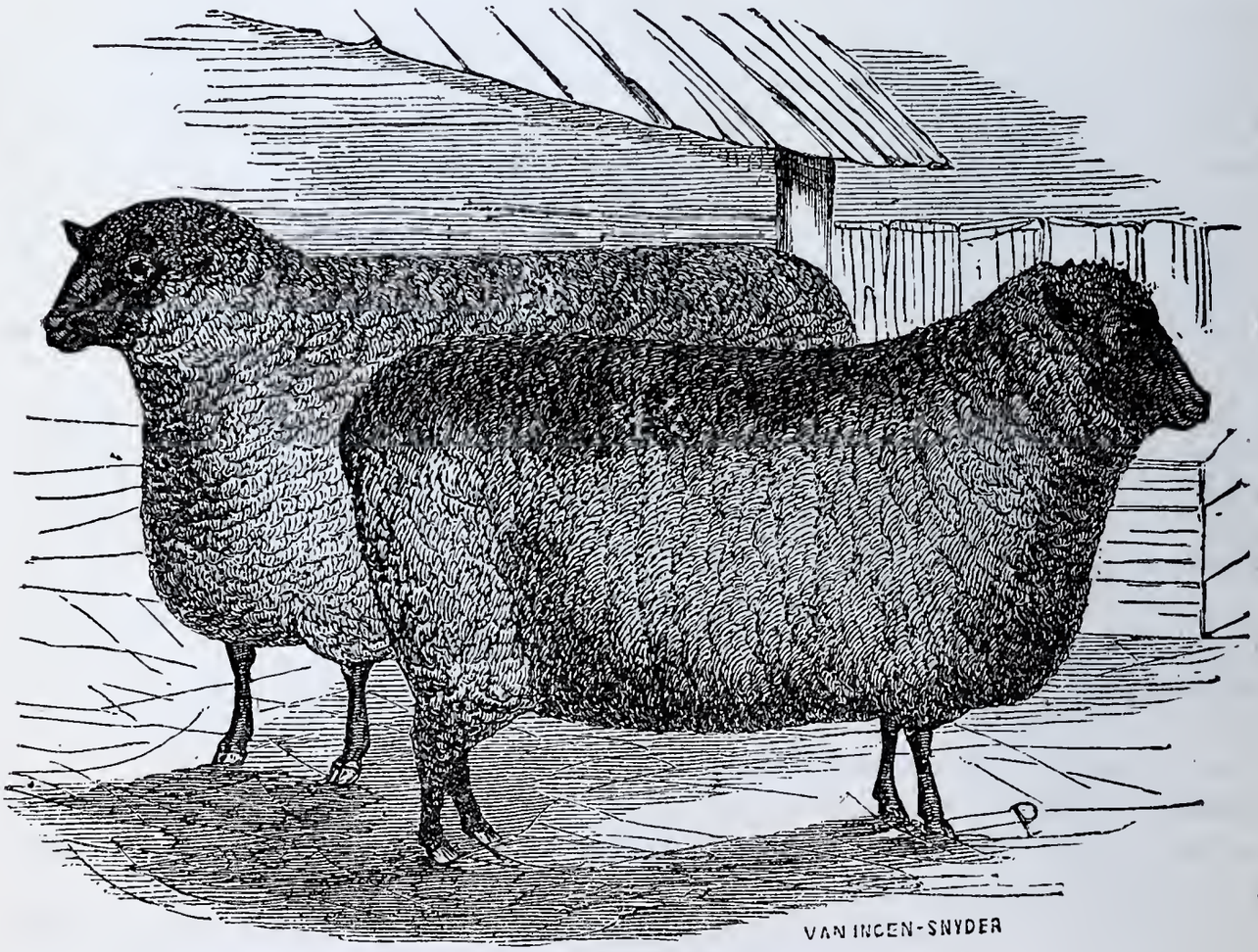
History.—The Cheviot is a cross between a Lincoln and a breed of common sheep found in the hilly parts of the Scottish lowlands, believed to be descended from common sheep of Spain, cast ashore here in 1588 from wrecks of the Spanish Armada.

THE IMPROVED KENTUCKY.

The Improved Kentucky is a white, coarse, long-wool, hornless sheep, heavy bodied and heavy fleeced, resembling the Cotswold, but the quality of its wool, midway between the Leicester and Cotswold, distinguishes it. It is a mutton and wool sheep.

History.—The Improved Kentucky is an American breed originating in Frankfort, Ky., about 40 years ago. It came from successive crosses, as follows: Beginning with local,

SOUTHDOWN RAM.



SOUTHDOWN EWES.

common ewes and a Merino ram, the issue was crossed with a Leicester ram, this with a Southdown ram, this with a ram one-quarter Southdown and three-quarters Cotswold, this twice successively with Cotswold rams, this with an Oxforddown ram, and this with a mixed Cotswold, Oxforddown and Leicester ram, followed by careful inbreeding.

THE CARAMAN OR FAT-TAILED SHEEP.

The Caraman is a white, short, soft-wool sheep, of different varieties and sizes, but readily identified by its remarkable tail, which weighs from 15 to 20 and in some instances 150 lbs.; the fat being used by some in place of butter.

History.—The Caraman is a native sheep, found in portions of Asia and Africa, and by some is regarded as a separate group. Those now in the United States are from recent importations from Karamania, in Asia Minor.

THE ANGORA GOAT.

The Angora Goat is of a grayish white, about as large as a medium-sized sheep, has a square build, a straight back, hog-shaped head, lifted ears, large, long, wavy horns rooted close together on top of the head, and spreading at once laterally and pointing a little backward, a tuft of long, coarse hair under the chin, clean, trim legs, an undercoat of short, coarse hair, and an outer one of long, curly, soft and silky hair, termed mohair. Both coats are used, and together weigh about 2½ lbs.

History.—The Angora Goat is an improved variety of a common goat, native of the district about Angora, in Asia Minor. It was imported into this country about fifteen years ago.

THE CASHMERE GOAT.

The Cashmere goat is generally of a grayish white, built much like a sheep, is of medium size, back near the hips a little crowning, ears long, wide and drooping, no tuft under the chin, small horns, sometimes spiral, shooting out near each other from top of the head erect or slightly spreading and pointing a little backward, a long, heavy outer coat of coarse hair and an under coat of soft, silky, fluffy wool, weighing about one-half pound, and used for Cashmere shawls.

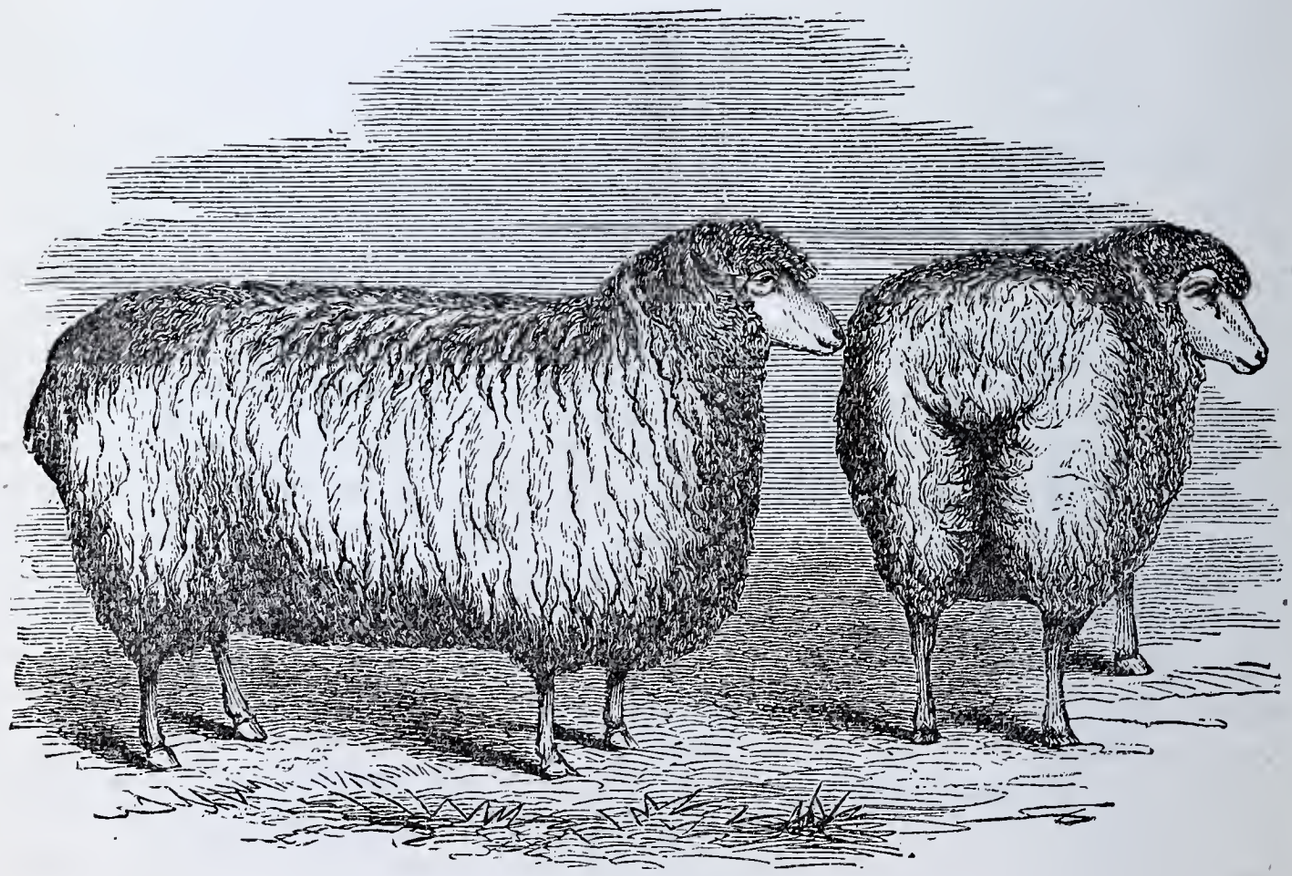
History.—The Cashmere goat is a noble species of the goat, inhabiting the high tablelands of Cashmere, Thibet and Mongolia, in central Asia. It was imported into the United States about fifteen years ago.

BREEDERS' REPORTS BY COUNTIES.

ALLEN COUNTY.

J. H. Runyan, Iola.—Have been raising sheep here 4 years; some little previous experience. Have about 300 now; got the original stock in Missouri. A cross of common ewes and Merino rams gives best wool; for both wool and mutton, Cotswolds. Annual increase of my flock, about 50 per cent. Fleeces average 4 pounds. Kansas City and St. Louis are the markets for mutton, averaging 3 cents, gross. Price of ewes, $2.25; wethers, $2.75. Sold wool in 1879 for 19½ cents. For wool, grade Merinos most profitable. Ewes may be profitably kept as long as they live; wethers should be sold when 5 years old. Lose about 5 per cent. annually by natural causes, 20 per cent. by disease, 2 per cent. by wolves, none by dogs or by exposure after shearing. My sheep are kept in an inclosure; corraled at night. As soon as grass begins to fail, give light feeds of grain; keep in corral with shed on north; feed 8 tons prairie hay to 100 head, and 60 bushels corn; generally have a piece of rye to turn on during winter; put ewes

COTSWOLD RAM.



COTSWOLD EWES.

on rye in lambing season. When on grass, give plenty of salt, and free access to water. The following statement shows cost and profit of my flock:

Cost of flock	$905 00	
Feed, care, etc	340 00	
		$1,245 00
Received for wool	$530 00	
Sheep sold and butchered	160 00	
Value of stock on hand	725 00	
		1,415 00
Net profit		$170 00

Greatest drawback is want of tame grasses. It is beneficial to give sulphur with salt occasionally. Shelter in wet and stormy weather is necessary.

S. B. Wilhite, Humboldt.—My flock consists of 80 head. The number that can be successfully raised in one flock depends mainly upon the range. My sheep came from Missouri; rams from Clay county, Mo. Consider Southdown and Scotch wool sheep most profitable for fleece and mutton; they have proved very healthy, and grow to large size. Have handled only Missouri sheep. Fleeces from my sheep average 8 pounds unwashed. Mutton brings 2½ to 3 cents per pound. Ewes are worth $2.50, and wethers $3.50. Sold wool in 1879 for 25 cents per pound, unwashed. Do not think it profitable to keep sheep beyond six years of age. Have lost no sheep from disease or any natural cause; principal loss has been from dogs. Are kept in inclosed fields during the day, and corraled at night if weather renders necessary. Feed pretty strong in winter, and shelter in bad weather. Twice a week give salt, rosin, wood ashes and saltpeter, mixed in equal parts. This will always keep sheep healthy.

James Townsend, Iola.—Have been engaged in sheep husbandry 6 years in Kansas; had 6 years' experience in Johnson county, Indiana. Cheap land and abundance of pasture give Kansas advantages for sheep culture not found in Indiana; while I know of no disadvantages here in Kansas that are not equally found in that State, excepting wolves here. My flock numbers 152; from 100 to 500 may be kept in one flock successfully. Commenced here with Missouri ewes, and rams brought from Ohio. Do not believe rams are impaired by the process of acclimation. Consider that Missouri ewes having a cross of Merino blood, bred to Cotswold bucks, will give most profitable cross for wool, while Cotswolds are preferable for both wool and mutton. For past two years my increase has been about 40 per cent. Cotswolds are as prolific as any breed. Maximum weight of fleece from my sheep is 12 pounds, minimum 4, average 6. Price of ewes and wethers, $2.50. My wool for 1879 sold for 20 cents per pound. Medium grade of wool most profitable. Have only raised sheep for wool. Sheep may be kept profitably up to five or six years old. My annual loss from natural causes has not exceeded 2 per cent. Have lost some by scab; none from exposure after shearing or from dogs; about 6 per cent. by wolves. My flock is kept in an inclosure; not corraled or confined at night in summer. They are kept on good pasture during summer. In winter protected by good sheds; fed one ear of corn per day and as much hay as they will eat. Original cost of flock, $80; present value, $475. Have realized about $1.20 per head annually for the wool. Consider the greatest drawback to success in Kansas is want of proper care.

ANDERSON COUNTY.

J. S. McCartney, Garnett.—Have been engaged in sheep culture in Kansas about 4 years. Had 12 years' experience in central Illinois. Kansas has great advantages for cheap raising of sheep—free pasture, hay for the cost of cutting, clear water, and fine climate. Have at present 700. Two thousand can be kept in one flock successfully in summer, if there is a good range; in winter 400 is enough for one flock. My sheep came originally from Missouri. Most profitable breed for wool is Merino and its crosses; coarse or long-wooled ewes bred to Spanish Merino bucks produce the medium or de-

HAMPSHIREDOWN RAM.

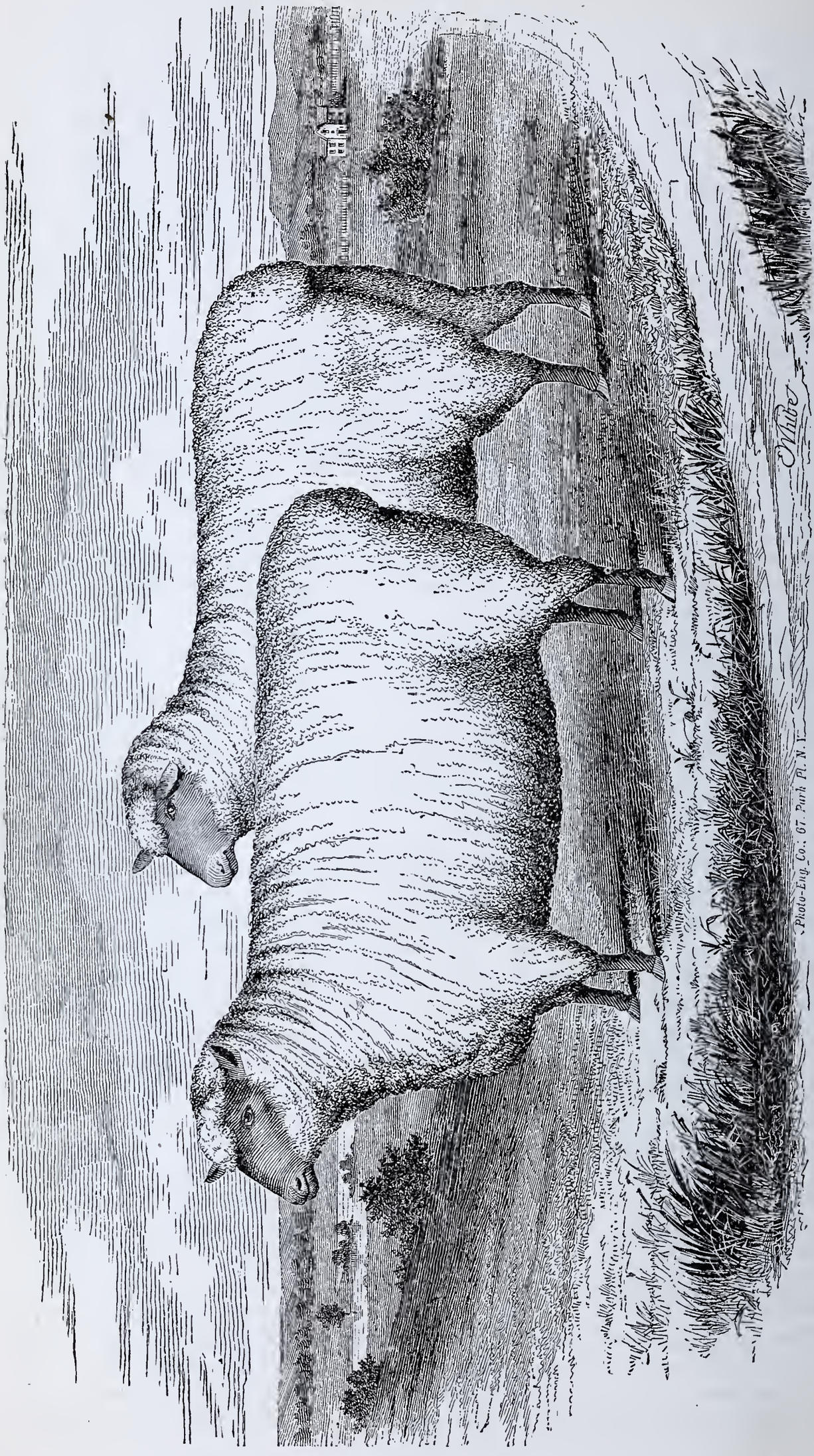
laine wool which brings the highest price now; for mutton, Cotswold and its crosses most profitable; for both wool and mutton, best breed is Spanish Merino bred to Cotswold or native ewes. My average annual increse has been about 75 per cent. Long-wooled breeds are most prolific—that is, they bring the largest per cent. of twins. Missouri ewes, I think, make best mothers. Maximum weight of fleece from my flock, 12 pounds, minimum 2, average 5¼. Sheep sold for mutton bring about 3 cents per pound. Present price of ewes from $2 to $4; wethers from $2.50 to $3.50. Sold my wool in 1879 for 21 cents per pound. Do not think there is any great profit in keeping wethers for wool alone; would sell at maturity. Do not think it pays to keep ewes after six or seven years of age. My loss from disease, about 2 per cent., the disease being pneumonia and grub in the head; about 1 per cent. from wolves. Herd during the day and corral at night. Turn my sheep on grass in the spring as soon as they can get a bite; have lambs come from 10th of April to 10th of May; shear about 1st of June; commence feeding as soon as grass begins to fail; salt once every week, and during hot days see that they have clean water and good shade. During the winter, feed 1 bushel of corn in the shock per head, and 1 ton of good hay to every 10 head. Have good sheds—they are decidedly necessary. Figures for cost of my flock are as follows:

500 Missouri ewes	$1,250 00
12 months herding and feeding	180 00
500 bushels corn, at 20c	100 00
50 tons hay, at $1	50 00
4 barrels salt, at $3.50	14 00
10 bucks, at $10	100 00
Shearing	25 00
	$1,719 00
2,500 pounds wool sold at 20c	500 00
	$1,219 00

So that my present flock of 370 lambs, 485 ewes and 10 bucks—a total of 865 sheep—cost $1,219.00. Only drawback in Kansas is lack of tame grasses for winter pasture.

ATCHISON COUNTY.

W. L. Challiss, Atchison.—Have been engaged for 7 years past in sheep raising in Kansas. My flock numbers 2,100. From 2,000 to 3,000 may be successfully kept in one flock in summer, but in winter 500 is enough. Bought my ewes in Missouri and Kansas, and rams in Missouri, Iowa and Kansas. Think a cross of Merino bucks with coarse-wooled ewes produces wool that brings the highest market price in this country. For mutton, Southdown is perhaps the best breed, though Cotswold and Leicester are but little inferior in quality and excel in weight of carcass. Crossing either of these breeds with common ewes will produce good mutton sheep. For both wool and mutton, Cotswold, Leicester or Lincoln bucks crossed with Merino grades will produce sheep that will give a good quantity and quality of wool, and large, well-rounded carcasses, profitable for mutton. Average annual increase in my flock has been 75 per cent., but this is a low percentage, although in large flocks it is always less than in small ones. One season I attributed many abortions and losses to feeding on over-ripe millet, and last year similar results followed the use of spoiled clover. Maximum weight of my fleeces, 22 pounds, minimum 3, average 5 to 8. Mutton goes from here to Atchison, Chicago and St. Louis. Price, $4 per hundred pounds gross. Present price of ewes, $2 to $4; wethers, $2.50 to $4. My clip for 1879 sold for 19 cents per pound in the dirt, immediately after shearing. Medium wool most profitable grade. Wethers can be profitably kept for wool to the age of 4 years, when they should be sent to market. Do not think it profitable to keep sheep after 5 years old. My losses from natural causes are 2 per cent. Have lost none from disease, or exposure after shearing. Loss by dogs, quarter of 1 per cent.; by wolves, half



HAMPSHIREDOWN EWES.

of 1 per cent.; by accident, half of 1 per cent. My flock is herded, and at night kept in dog and wolf-proof corrals. After shearing and dipping, sheep are turned on the range, in care of a competent shepherd, corraled at night, and given all the salt they desire. After frost has killed native grasses, they are pastured on blue-grass and clover. For winter feed, I use corn fodder, clover hay, bran and corn. Cob meal does well for sheep. Ample sheds are provided, open only to the south. Shedding is very needful in sheep-husbandry. Have with my sheep a number of Cashmere goats, but whether to the benefit or injury of the flock I cannot say. The trouble and annoyance they have caused me is tenfold more than any benefit so far noticed. Greatest drawbacks to successful sheep raising in Kansas, in my estimation, are the difficulty of getting and keeping competent shepherds, and presence of dogs, wolves, cockle and sand-burs, and shanghai fences. Climate and herbage of northern Kansas are specially adapted to sheep raising. There is a ready market for both wool and mutton. No diseases prevail, and only from accident is there anything to affect the flocks. Scab is most to be feared. It does not prevail in Kansas, but abounds in Missouri and Colorado, and sheep from those States often infect flocks in Kansas. As a precaution against disease, after shearing I always dip my sheep in a decoction of tobacco, carbolic acid, wood ashes and sulphur, at from 100° to 120° of heat. This cleanses the skin, kills all ticks, and the sheep go to grass in good shape.

George M. Blodgett, Locust Grove.—I commenced raising sheep in Kansas in 1857; had previously been engaged in the business in Kalamazoo county, Michigan. Find that sheep are more healthy and fleeces heavier here than in Michigan. Have now 500 sheep; my first sheep were bought in Missouri. Common Missouri sheep crossed with Cotswolds or Southdowns are most profitable for wool; for mutton, a cross of Colorado with Merinos is best. Fed some wethers of that cross that averaged 150 pounds. For both wool and mutton, should take Cotswold and Merino. My average animal increase has been one-half; consider native Kansas sheep most prolific. Maximum weight of fleece from my flock 14 pounds, minimum weight 5, average 7. Market for mutton is Atchison and Leavenworth; price being 5 cents per pound, gross. Ewes can be bought for $2.50; wethers from $2.50 to $3. My clip for 1879 sold for 40 cents per pound. Most profitable grade of wool, common 5-inch. I have the greatest profit in selling young; do not think it pays to keep sheep after they are 3 years old. Annual loss from natural causes has been 1 per cent; dogs about one-half of 1 per cent. Flock is kept in an inclosure and corraled at night. In summer keep them in pasture. In winter keep them under sheds about four feet high, covered with hay or straw; feed on corn fodder and hay — though fodder is preferable — and give about two ears of corn to each sheep per day. Cost is about 50 cents a head. From an experience of 25 years farming in Kansas, and after raising cattle and hogs, I find sheep most profitable.

Edwin R. Brown, Atchison.—Have been raising sheep in Kansas 8 years; had many years' experience in Mississippi; sheep do much better here than in that State; not so liable to disease here. Have now only 100; 400 to 500 may be kept in one flock to advantage. I think Southdowns best for general purposes, though Cotswolds are best for heavy fleeces. Southdowns do better than any other on short, scant pasture. I bred almost every kind in Mississippi, but have raised only Southdowns in Kansas; they have proved best both for wool and mutton. Average annual increase in my flocks, about 50 per cent. Average weight of fleece, about 6 pounds. Mutton is sold at Atchison, and brings 3 to 4 cents a pound, gross. Ewes can be boughtat $2.50 to $3; wethers from $3 to $5. Sold my wool, in 1879, at 20 cents per pound, in the dirt and "a little burry." Do not consider it would be profitable to keep sheep after five years old. Loss from natural causes not over 2 per cent., while from dogs it has been 10 or 15 per cent.; loss by wolves not so great as by dogs. My flock is kept in an inclosure, and corraled

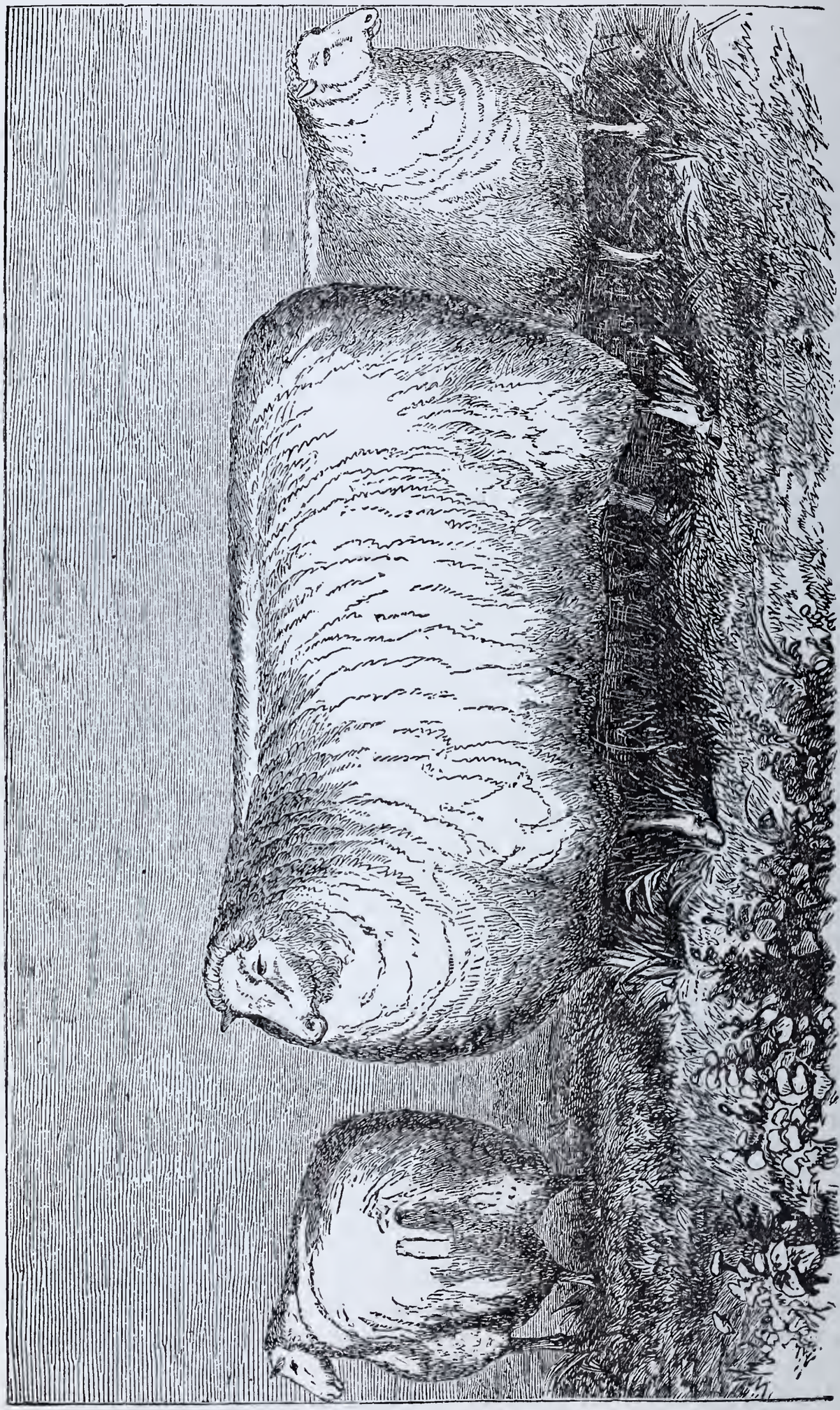
LINCOLN EWE.

at night. In summer, they have no attention except salting. In winter, feed them hay, and in bad weather, grain. Cost of feeding is trifling—increase in the flock more than paying for the keep, and the fleece is clear gain. I do not think there is any advantage in keeping goats with sheep; possibly it might be some protection against dogs. Think the greatest drawbacks in Kansas are the losses by dogs.

BARBOUR COUNTY.

T. L. Lindley, Medicine Lodge.—Have raised sheep 4 years in Kansas; had some experience in Pennsylvania. Think Kansas better for sheep than Pennsylvania, especially as regards foot-rot, as I have known two lots affected with that disease to cure up without doctoring. Have 554 in my flock; 1,000 is enough for a flock, though if carefully handled 1,500 may be successful. My sheep were brought from Pennsylvania. Consider Merino best breed for wool. Combing wools bring the best price; but I can raise two pounds of Merino wool at same cost of one of combing. Best breed for mutton, a cross between Cotswolds and Merinos; for both wool and mutton, common Missouri ewes bred to Merino bucks most profitable; they will do well in large flocks, while large-framed, long-wooled sheep do not. Average annual increase of my flock has been about 75 per cent. of the number of ewes; coarse-wooled sheep are most prolific and best mothers. Maximum weight of fleeces 19 pounds, minimum $3\frac{1}{2}$, average $7\frac{1}{2}$. Price of ewes, $4.25; wethers, $3.00. My wool sold for 18 cents per pound. Most profitable grade of wool is combing, when sheep are raised on a small scale; on a large scale, light fine wool, as so many more sheep can be kept together. Where wethers shear heavy fleeces, more profitable to keep them for wool than to sell for mutton; my wethers shear from 12 to 15 pounds each, which gives me almost 100 per cent. on the cost of keeping. It is not, I think, profitable to keep sheep after they are 5 years old. Loss from natural causes not more than 1 per cent. My flock is entirely free from disease; loss from wolves about 100 in 3 years. In winter of 1876–77, lost more than half my flock from their not being acclimated. Are herded in day time and corraled at night. Here sheep are herded at night the year round; but they should have a warm place to lie at night; a good wind-break is needful. Sheep will live here without feed, but it is best to feed on stormy days and through January and February; they can be wintered very well at a cost of 20 cents per head for feed. Do not think there is any advantage in keeping goats with sheep. Greatest drawback to sheep raising in Kansas is inattention; sheep need very close attention; those brought from the East should be put on the range early in the season so as to get acclimated before winter. Rams shipped from the East are of little value the first fall. Stock winters here very well on native grasses, and natural protection is very good. Sheep are much more healthy when allowed to graze during the winter and given a little feed when necessary.

S. S. Funk, Lake City.—Commenced raising sheep here in June, 1879. Had previously handled sheep in California, Missouri and Texas. Have now between 500 and 600. Part of my stock is from Illinois; some from this State. Think Merino crossed with Shropshire as good as any for every purpose. For wool alone, a three-quarters-blood Merino is good enough. Pays best to sell wethers from 3 to 5 years old; ewes may be kept until 6. Have but little loss from any cause. Herd in summer, turning out early; grazing until about 10, when they go to shade and water; graze late in the day until dark, when they are corraled. Consider plenty of water and good shade essential. In winter treat them about the same. Am now feeding a little millet at night. Have a clump of brush for shelter. Tried goats with sheep once; find them an injury. Scab is the only disease I have seen here; it is cured by dipping in tobacco water. Think one-third the feed will winter sheep here that it takes in the eastern part of the State.



IMPROVED KENTUCKY SHEEP.

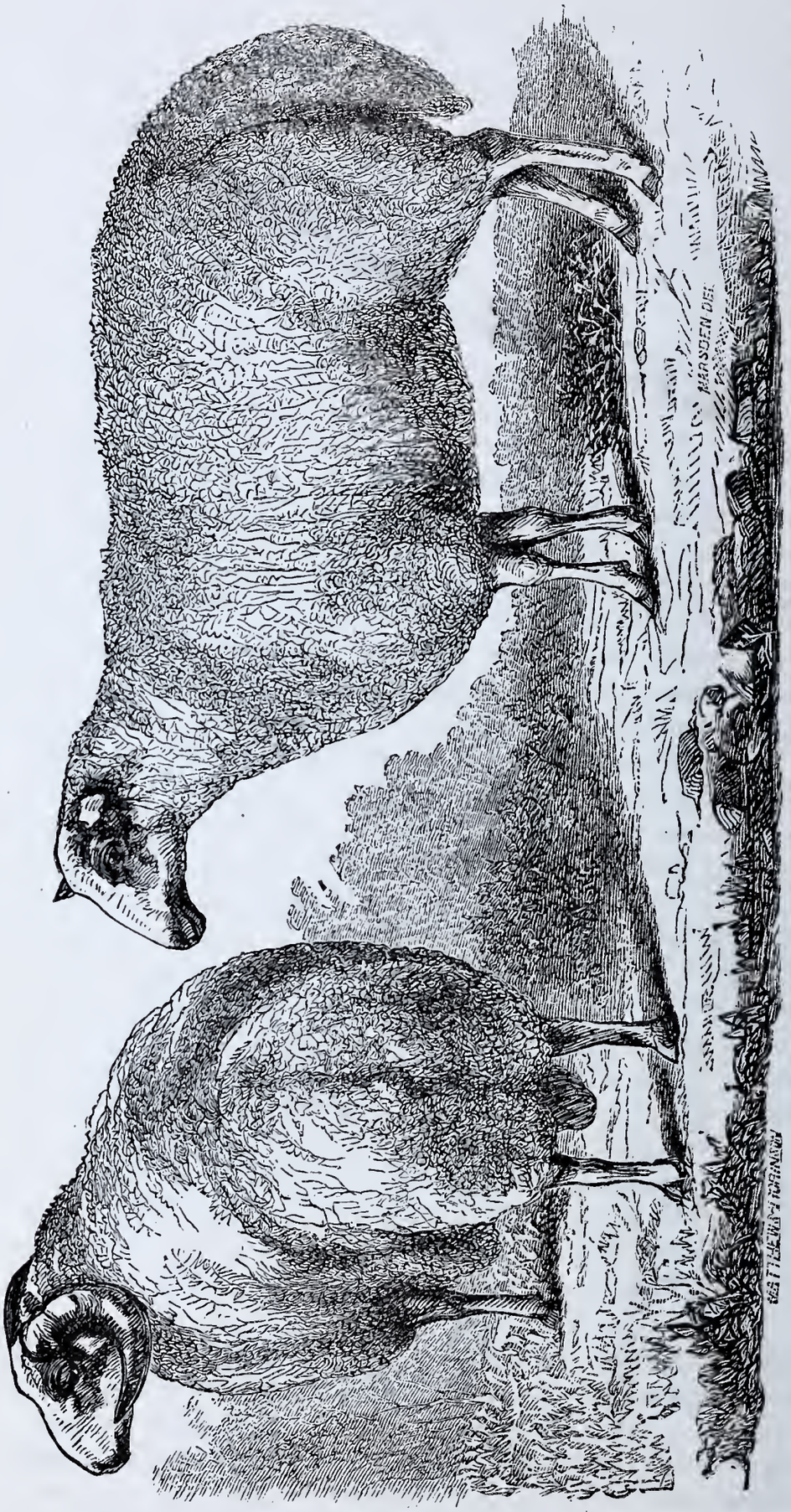
BARTON COUNTY.

James K. Grier, Great Bend.—Commenced raising sheep in Kansas in 1876; had no previous experience. Have now 1,100 medium sheep. From 1,000 to 1,500 may be kept in one flock successfully in the summer. First flock I owned came from Colorado; sold those, and purchased sheep from Missouri and Iowa; Colorado sheep were the best to herd; flock now consists of the increase of the Missouri and Iowa sheep, which were crossed with Merino rams. Think this cross most profitable to hold in large flocks for wool; for mutton alone, suppose Cotswold is most profitable; but they must be handled in small flocks; for both wool and mutton, a cross from Colorado or Missouri ewes and Merino bucks is best. Annual increase has been about 90 per cent. of the number of ewes. Maximum weight of fleece 9½ pounds, minimum 3, average 5. Good ewes are worth $2.50; wethers, $2.25. My clip for 1879 sold for 19 cents per pound; same wool would now bring 30 cents. Medium wool most profitable. My experience is that a fair wether lamb's first fleece will pay for his raising; after that half the fleece each year will pay for keeping, so that whatever price he may bring at maturity, it is all clear gain. Does not pay to keep wethers after 4 years old; good ewes may be kept till 6. My losses from natural causes, from 20 to 25 head in 1,000; no loss from disease or wolves; have only lost one sheep in three years by dogs. My flock is herded the year round, except in winter storms, and always corraled at night. My experience is that it takes about half the wool to pay expenses of keeping a flock of sheep, leaving the other half and the increase for profit. During the winter I feed with hay, grain, straw and millet; my sheep depend entirely on grass from about first of April; this season they are still doing finely on grass up to this date (Dec. 13). Keep in winter in good sod shed with straw roof. Cost for herding, salt, feed, etc., $450 a year for each 1,000 head. In my first flock was a pair of goats; they proved a great nuisance, driving sheep out of sheds, and when on range no sheep would feed near them. Have never yet seen any drawbacks in Kansas that need discourage any industrious man. Would advise those desiring to come to Kansas to raise sheep, if they intend to go to western portion of the State, and let their flocks increase for years; it would be best to buy long-wooled Colorado ewes and use good Merino bucks, as they are more easily herded; will winter better on the prairie and with less care than Eastern sheep. If brought from the East, it should be early in the season, so as to get used to grass as it dries off in the fall.

Cyrus J. Fry, Clarence.—Have been in sheep business here 6 years; had no previous experience. Have now 960 head; original stock came from Ohio. Merinos are best for wool; Cotswolds for mutton; for both wool and mutton, grade Merino with about half Cotswold. Average annual increase, 85 per cent. of breeding ewes. Market for mutton, Great Bend, bringing 2¾ to 3¼ cents. Medium wool most profitable. Sheep may profitably be kept till 6 or 8 years old. Lose about 2½ per cent. annually by natural causes. My sheep are herded in summer, and kept in movable yards at night, changed every week. In winter, protected by straw sheds; I feed half a bushel of corn to 100 head in the morning; let them run on buffalo grass during the day, and feed hay in racks at night. Goats with sheep are a nuisance. Great drawback is want of attention. Give any flock of sheep due attention, and the investment will pay.

BOURBON COUNTY.

J. Wemple, Fort Scott.—Have been engaged in sheep husbandry in Kansas for 5 years. Had about 30 years' experience in New York and Ohio; consider Kansas superior for sheep raising. Have now 300 head; 1,000 can be successfully kept in one flock. My ewes are common Missouri stock, purchased in this vicinity; rams, Spanish Merino, one raised in Missouri, the other brought from Vermont this fall; both have done well. A neighbor has two rams brought from Vermont this fall that have done as well as his rams bred here. Most profitable cross for wool, Cotswold, Leicester or Lincoln on Span-



CARAMAN, OR FAT-TAILED SHEEP.

ish Merino. This cross is ahead of all others for both mutton and wool. My average annual increase is about 80 per cent. Cotswolds are most prolific. Maximum weight of fleece 10 lbs., minimum 2, average 6. Fort Scott is our market for mutton, at 3¼c. per lb., gross. Ewes are worth $3, wethers $4. Sold my wool in 1879 for 20¾c. per lb. Most profitable grade of wool is from a cross between Cotswold and Spanish Merino. Consider the best time to sell wethers is as soon as they can be fatted after second clip. Not profitable to keep sheep after 6 years of age. My losses from natural causes, about 2 per cent.; from dogs about 1 per cent. My sheep are herded and corraled at night. In summer, I keep constantly in troughs a mixture of pine tar, sulphur and salt where sheep can get at it; have plenty of good clear water, and good range; if possible shelter from sun at midday; in winter keep in open sheds, so built as to give protection from storms; feed stock sheep all the hay they will eat and one pound of corn per day; prefer, however, in place of hay to feed sheaf oats, corn fodder, millet and straw of any kind, as all make wool; corn is cheapest and most available grain; but peas, beans and millet add more to weight of fleece, as these give more oil. Have never kept goats with sheep. Present dog law in my estimation is the greatest drawback to successful sheep raising in Kansas. My experience in cross-breeding, in coupling Cotswold rams with Merino ewes, has been very unsatisfactory; the Merino ewe is a moderate milker, and does not give enough nourishment for the large-bodied lamb produced by the Cotswold cross; coupling native or Cotswold ewes with Merino rams is most satisfactory, the produce being of rapid, fine growth; at 6 months, if properly cared for, will weigh from 80 to 100 pounds; at a year old will be a fine sheep.

John Bishop, Glendale.—Have been raising sheep for 6 years in Kansas; previously had experience in Ohio. Great advantages Kansas has are, cheaper pasture, low price of feed, and mild winters. Have at present 577 sheep; about 200 best number to keep in one flock. Mine were purchased in this and adjoining counties. For wool I think high-grade Merino most profitable; for mutton, Southdown; both wool and mutton, Merino. Average annual increase of my entire flock, about 40 per cent. Southdowns are most prolific. Maximum weight of fleece 22 pounds, minimum 2½, average 5. Sell mutton at Fort Scott at from 2½ to 3 cents per pound, gross. Ewes sell for $2; wethers from $2.50 to $2.75. Most profitable grade of wool at present is medium. My wool for 1879 brought 23 cents per pound. Consider it more profitable to keep wethers for wool than to sell at maturity. Sheep can be kept profitably till 7 years old. In a flock of 500 of all ages, annual loss would probably be 5 per cent.—about one-third of this from old age. Have lost but one by dogs, and none by wolves, in last two years. They are herded, and at night confined in a corral. My custom is to turn on the range about 25th of March in charge of a herd boy; salt once a week; in the fall, turn into stalk-fields as soon as corn is gathered; about Christmas, commence feeding hay, and give shock corn equal to about one ear a day for each sheep. Shock corn I consider cheapest and best feed. Am satisfied that my sheep, counting increase, have brought me nearly $2 per head every year. Profit on my flock of 577, for 1879, was $666.15.

C. Huntington, Fort Scott.—Have been engaged in sheep raising in Kansas 9 months; have had long experience in Vermont, when my father owned a flock of what were called Saxon Merino sheep. Have at present 1,000. Cross of Cotswold and pure Merino. Rams brought from Vermont this fall have done as well as acclimated ones. I believe a cross of thorough-bred Merino rams to half Cotswold ewes will give best cross for both wool and mutton. Average weight of my fleeces, 4⅓ pounds. Think it is not profitable to keep wethers after maturity; should be sold at 2 or 3 years old, and ewes at 6. Loss from natural causes last year 2 per cent; no loss from disease, dogs or wolves. Flock is herded and confined in corral at night. In bad weather, summer and winter, are put

ANGORA GOAT.

CASHMERE GOAT.

under sheds; in winter, fed hay, corn-stalks, corn, oats and bran. So far as my short experience in Kansas goes, sheep raising is very profitable; burs the greatest drawback.

Frederick Scoville, Fort Scott.—Have been a sheep raiser 5 months. Have 605 sheep—common Missouri, with a cross of Cotswold; have a dog and wolf-proof corral, with a good shed; divide my flock into three parts, feeding them separately. Think Merino most desirable breed to cross with common ewes; this cross makes a good heavy sheep, desirable for both wool and mutton. Don't think it will pay to keep wethers for wool after 2 or 3 years old. My sheep have no disease; had them dipped, by way of precaution, in the fall. Scab, foot-rot and catarrh are prevailing diseases. Have two goats in my flock, but can't say whether they are a benefit or not.

BROWN COUNTY.

Timothy Jones, Hiawatha.—Have been raising sheep 4 years in Kansas; had previous experience in South Wales. Advantages in Kansas are, that feed is cheaper, sheep healthier and more productive, both in wool and increase. Have 500. In winter, 100 are enough for a flock; in summer, there is no limit to number, except range. My ewes are common natives; rams, Cotswold, bought in Illinois. For wool, Cotswolds are the best; for mutton, Southdowns; both wool and mutton, a cross of common ewes with Cotswold bucks. Increase of my flock this year, 192 lambs from 205 ewes. Average weight of fleece, 6¼ lbs. Mutton brings 3 cents per pound, live weight. Ewes are worth $3.50; wethers, $4. Sold my wool for 1879 for 25 cents per lb. Sheep may be profitably kept from 3 to 5 years old. My annual losses from natural causes, about 5 per cent.; none by disease, exposure after shearing, dogs or wolves. My sheep are herded on open prairie, corraled at night. In order to keep sheep successfully, one must have dry, well-ventilated shelter, with plenty of green winter feed, such as timothy, blue-grass, rye, and from four to five bushels of corn to the head, together with oats, rye or barley. I think it an advantage to have goats with sheep; they lead the flock, and stink dogs and wolves away.

M. J. Walsh, Mission Centre.—Have had 4 years' experience in this State. Have 450 head; 500 may be kept successfully in one flock; with unlimited range, perhaps 1,000. Bought my ewes originally in Kansas; bucks for first two years were raised here; next year bought my bucks in Ohio; did not see any bad effect on bucks shipped here, first season. Most profitable for wool, are the common ewes crossed with Merino bucks; for mutton, Leicester is my first choice; for both wool and mutton, Leicester crossed with Spanish Merino bucks. Last spring, 28 ewes had 50 living lambs. Ewes were crossed with Southdown bucks. Maximum weight of fleece from my sheep 9 pounds, minimum 4, average 7½. For mutton I get $4.50 per hundred, gross. Price of ewes $2 per head. Most profitable grade of wool from coarse-wooled ewes crossed with Spanish Merino bucks. I sell wethers at 2 years old, after shearing, believing that more profitable than keeping for wool. Do not think it profitable to keep sheep after 4 or 5 years old. Loss about 9 out of every 100 annually, from natural causes; by dogs, sometimes 50 per cent.; wolves, same. My flock is confined in an inclosure, part of the time herded; not corraled at night. In winter I feed plenty of good prairie hay with a small ration of corn, and keep in open shed for shelter. My idea is that every 8 head cost about $5 to keep in fair condition. Do not know anything about keeping goats with sheep. Greatest drawbacks to success, dogs and wolves.

Daniel Haigh, Fairview.—Have been raising sheep in Kansas since February, 1878. Had about 4 years' experience in Kendall county, Illinois, with 150 sheep. There I had no range; here, good range immediately adjoining me, and can also make plenty of hay for winter feed. Have now 465. Think 1,000 may be successfully kept in one flock. My Southdown rams I obtained in Missouri; original stock of ewes and wethers also came from Missouri. Missouri ewes crossed with Southdown seem so far to produce

a very satisfactory grade of wool, and promise good results. For mutton alone, Southdown assuredly best; think they will also prove best for both wool and mutton. Increase in my flock first year, 90 per cent.; last spring, owing to bad weather, lambs that lived were only about 75 per cent. Average weight of fleece from my sheep, 5 pounds. Price for mutton, from $2.50 to $3 per head. Sold my wool for 1879 at 24 cents per pound. Think Southdown wool most profitable. Think it best to keep wethers till 4 years old, at which age they will give largest weight for mutton; ewes should be kept till 6 years old and fattened for market. My losses are about one-half of 1 per cent. from natural causes; have had no disease; lost none by dogs, and only about 8 in two years by wolves; 10 have died from old age. Are herded in summer, confined in corral at night. As soon as possible in the spring, I turn on range, driving out about 7 o'clock mornings, bringing into corral at 12, turning out again from 2 to 7, then corral for night. About November 1, according to the season, they are taken off prairie, and fed a little grain, increasing the quantity until they get a pint of corn every morning; fill racks with hay twice a day; corral every night. In corral is a good shed with plank roof. Cost of feeding for the winter of about 5½ months averages 70 cents per head. Paid for my flock of 430 ewes and wethers and 2 Southdown rams, $1,063; cost of feed during winter of 1878 and 1879, on 362 sheep, $253.40; making total cost, $1,316.40. Sold 125 fat wethers for $354.80; wool from 92 sheep in 1878, $101.64; wool from 362 sheep in 1879, $383.48; 465 sheep and 2 rams on hand, valued at $1,460; making total receipts, $2,299.92—a net profit of $983.52 for 20 months I have been in the business. My observation shows greatest drawback in Kansas, the want of tame grasses for early and late pastures; another trouble arises from wolves; also far too many worthless dogs. Think if sheep could run on good blue-grass pasture (or other good tame grass), it would not be necessary to feed grain or hay more than three months in the year, and they would come out better in spring than when kept so long on dry feed.

William C. Pace, Fairview.—Have been raising sheep here about 2 years, and have tended sheep on my father's farm, in England, since boyhood; also raised them in Jackson and Clinton counties, Iowa. Climate of Kansas much more favorable than that of England or New England States. At present, have 155 Cotswolds. Shall change to Southdown or Canadian Whiteface, as those I have are too small. Number that may be kept in one flock depends on range and shed room; more common sheep can be kept in a flock than fine ones; in any case, from 800 to 1,000 is enough. Bought my sheep in this State. Do not like Western sheep. In my opinion, better buy good Missouri ewes and cross with good Cotswold bucks for two years, then change to Southdowns, which will make an excellent cross, both for wool and the butcher. For mutton alone, Southdown is unequaled. Average annual increase of my flock, about 90 per cent.; average weight of fleece, a little over 7 lbs. Hiawatha is my market for mutton, at 4 cents per pound, gross. Wethers are worth $4 per head. Sold my wool for 1879 for 22 cents per lb. Most profitable grade of wool is fine, long Cotswold. I think it best to sell wethers at 2 years old. Sheep may be kept profitably to 6 years of age. My losses from natural causes are hardly worth mentioning; by wolves not nearly so great as by dogs, although the former get all the blame. Kansas wolves don't seem to attack full-grown sheep. My flock is herded during summer; corraled at night. In management of sheep, a good, tight board shed is of first importance. In winter, I feed hay and straw, with corn every other day; if stormy and very cold, a little corn every day; one ear is ample for each sheep per day, if plenty of good, early-cut hay is fed. In summer, I have little trouble, only taking care to house every night, and salt once a week. Have a good, well-trained shepherd dog. Cannot at present estimate cost of raising; I have been experimenting to get best stock, believing that in the end profits will be greater by commencing with best breeds. I do not think it advantageous to

keep goats with sheep. In my judgment, when sheep husbandry in Kansas fails to pay, something is wrong with the owner, for the soil and climate of this State are better adapted for sheep than any other that I know of.

S. L. Brown, Carson.—Have been engaged in sheep husbandry here 19 years; had some previous experience in Maine. Have now 100 head; original stock raised in Kansas. Most profitable sheep for wool are Cotswold and Southdowns; for mutton, Cotswolds. Two-thirds of my ewes have had lambs each year; natives are most prolific. Average weight of fleece from my sheep, 7 pounds. Sell mutton in home market for 9 cents. My wool in 1879 brought 23 cents. Medium wool most profitable. Most profit in selling wethers at 3 years old. My losses are very light from natural causes; by disease, none; about 10 per cent. by dogs, occasionally one by wolves and accident. My sheep are kept in pasture; corraled at night. In summer they do finely on grass. In winter, I give about a quart of oats each day per head; sheaf oats are excellent. Sheep will winter well on fall rye if there is not much snow. Cost of keeping, $1 per head annually. Think 100 sheep, well cared for, will net $200 per year. Greatest drawback to success, *dogs*.

BUTLER COUNTY.

A. J. Uhl, Douglass.—Have been for 13 years raising sheep in Kansas; previously had experience in Illinois and Texas. Find Kansas has much drier climate, not so much mud; sheep lots and corrals can be kept in much better condition; no fear of foot-rot, unless shipped in with stock from abroad; much larger percentage of lambs can be raised on account of dry weather at dropping-time, which, with me, is in March and April. In Texas, grass dried too soon, and winter feed cost too much. My flock came originally from Michigan; have owned same stock for 18 years; in that time had rams from Vermont, Illinois and Missouri. All seemed to do well, from whatever section they came, with proper care. Many bring sheep to Kansas late in fall, thin in flesh, half feed them, then attribute failure to *acclimation*. I think good feed and proper care all the acclimation needed in Kansas. Have at present 478 in my flock; 1,000 may be successfully kept in one flock. I consider Cotswold ewes, bred to Merino rams, best cross for wool; for mutton, Southdowns preferable. My experience is, however, that mutton alone will not pay; for both wool and mutton, cross from Cotswolds and Merinos best. I raise 85 per cent. of all lambs dropped. My average weight of fleece, in 1879, 17¼ pounds. Sell my mutton in Wichita at $3.40 per 100 pounds, gross. Price of ewes, culled, $5; wethers, $4. My wool for 1879 brought 20 cents per pound. Most profitable grade of wool, in my opinion, cross of Merinos and Cotswolds. Six years about as long as profitable to keep sheep. My loss from natural causes about 5 per cent.; none from disease, wolves or dogs; sheep herded during day, at night kept in corral. Put my sheep on prairie as soon as grass is high enough in spring, and keep there till fall, then turn into corn-field; when that is eaten, feed shock corn remainder of winter. Have owned sheep 21 years; they have always been profitable; some years have made 90 per cent., and with exception of one or two years, never less than 50 per cent. on the investment. Do not think it best to keep goats with sheep. Greatest drawback to success, *dogs*. They are a great nuisance, and should be heavily taxed.

S. J. Ensley, Bryant.—Have been engaged in sheep husbandry in Kansas, two years; previously in northeast Missouri, 14 years; find that dryness of soil here makes it preferable to Missouri. My flock consists of 100. From 500 to 1,000 may be successfully kept in one flock. My original stock came from Canada; do not seem to suffer from acclimation; are Cotswolds, and I think their fleece most desirable for wool; for mutton, Cotswolds crossed with Southdowns are preferable; for both wool and mutton a cross of Cotswolds with Merinos gives very good results. Average annual increase of my flock has been 100 per cent. of number of ewes. Cotswolds are very prolific. My

average weight of fleece, 11 pounds. Eldorado is our market for mutton; price, 3 cents per pound, gross. My wool for 1879 sold for 21 cents per pound. Cotswold wool brings highest price in this market. Wethers should be kept for wool until 4 or 5 years old, then sold for mutton; ewes can be kept profitably until 8 years old. My losses have been about 2 per cent. annually from natural causes, perhaps 1 per cent. from other causes. My sheep are herded with cattle during summer, and are corraled at night. I separate bucks from the flock about middle of August, turn in again 1st of November. Lambs should be weaned about September 1st, and turned on tender pasture as soon as taken from the ewes. Do not believe in keeping goats with sheep. My experience is, that a small flock does best anywhere; should have comfortable shelter in case of storms and severe cold weather, with plenty of clear well or spring water. Each sheep should be fed one bushel of shelled corn a month during the winter, with plenty of clover, timothy, millet, or Hungarian hay, or oats; prairie hay is not so good; should also have plenty of salt at all times. I mix 2 tablespoonfuls of saltpeter and 2 spoonfuls of sulphur with half a bushel of salt. As a preventive of scab, wash once with a decoction of tobacco, once with sulphur and rain-water, then with borax and rain-water—all after shearing.

CHAUTAUQUA COUNTY.

Ambrose Yancey, Cloverdale.—Have been engaged in sheep husbandry in Kansas since 1876; previously in Indiana and Iowa, although I never had very large flocks—from 50 to 100 in Indiana and from 100 to 500 in Iowa; flock now consists of about 700; original stock came from Iowa. I think what is called American Merino crossed on common, coarse, Western ewes produces best grade of wool; for mutton, would breed from Southdown bucks, though Cotswolds make very good mutton; for both mutton and wool, consider Merino most profitable. Have kept no accurate account of my increase. Brought from Iowa a few Southdown ewes, and think they raised more lambs than any other breed. Average weight of fleece from my sheep, 6 pounds. Ewes and wethers are worth $3. For most of my wool of 1879, got 23¾ cents per pound. Most profitable grade of wool, medium fine—it commands best price. Should sell wethers at 2 or 3 years old, if I had a very large flock; but with a small flock, should keep longer for wool. Sheep may be kept and do well till 10 years old; after that their teeth fail. My losses from natural causes here have not exceeded 1 or 2 per cent. each year; no diseases, and very few killed by dogs; wolves have sometimes taken lambs when the herder was negligent. My sheep are herded in summer, and yarded every night the year round. During summer and fall I do not feed anything; they are salted once a week. When grass gets dry I commence to feed, and during winter give all they will eat of millet, timothy, or prairie hay, also about half a bushel of shelled corn to each 100 head. Have not kept an accurate account of the cost, but think that the wool has paid cost of the flock I began with, including interest and all expenses, and that my present flock is clear gain. Advantage of keeping goats with sheep is merely imaginary; have about a dozen goats, but would gladly sell them cheap. Dogs and wolves are greatest drawbacks to success in Kansas. So far as my observation and experience go, am convinced that this part of Kansas is specially adapted to sheep culture, and when tame grasses are introduced so that sheep can graze the year round, this branch of industry will be very profitable.

D. C. Baldwin, Cedarvale.—Have been engaged in sheep husbandry for past 5 years in Kansas. My present flock numbers 900. If well cared for, I think from 1,000 to 1,500 may be kept successfully in one flock. Bought my original stock of ewes in Missouri; rams from Ohio. Most profitable sheep for wool is a cross with Merino as a base; for mutton, a cross of Merino on heavy-boned varieties, such as Cotswold; same would be preferable for both wool and mutton. Average annual increase of my flock,

about 70 per cent. Most prolific cross has been Merino, bred to hardy varieties. My average weight of fleece, 7½ lbs. Wichita or Independence is our market for mutton; price, about 3 cents per pound, gross. Price of ewes, $1.50; wethers, $2. Sold my wool of 1879 for 22 cents per lb. A medium fine grade most profitable. I do not think it pays to keep wethers after 4 to 6 years old, nor ewes after 6 to 7. My losses incurred annually from natural causes about 5 per cent., mostly among late lambs; have lost some lambs from scours in the fall; have not lost more than three head in five years by dogs, and but little trouble with wolves. I herd during day in summer, and always corral at night; give, about once a week, a mixture of one part sulphur to five parts common salt. In winter, feed well, giving good variety of feed—shock corn, bright straw, millet and prairie hay. Cannot give accurately the expense of my flock, but think from 50 to 70 cents per head will cover all annual expense, even without the accumulations of a farm, such as stalk fields, straw stacks, etc. No advantage in having goats with sheep; in some cases, a disadvantage. Greatest drawback to success, carelessness. Of course there is some danger of scab getting into a flock, but with watchfulness this may be guarded against.

J. A. P. Ten Eyck, Sedan.—Have only been engaged in sheep husbandry this year; have now 800. Should think from 1,000 to 1,200 could be kept in one flock successfully. Mine were bought in Arkansas. Think a cross of Merino and Cotswold most profitable for wool; same cross best for both wool and mutton. Ewes are worth $3; wethers, $2.50. Have so far had no losses from natural causes; dogs and wolves have killed about 20. Herd during the day, and confine in corral at night. Great drawback here, dogs and wolves.

CHASE COUNTY.

J. S. Doolittle, Cottonwood Falls.—Have been raising sheep in Kansas 5 years; have now 480 in my flock; they were bought in Chase county. Am experimenting with a cross of Leicester and Cotswold that I think will give size of carcass as well as good fleece. Average annual increase of my flock, about 80 per cent. Average weight of fleece, 5½ pounds from first cross of Cotswold on ewes whose fleece averaged 4 pounds. Sell my mutton at home at 3 cents per pound, gross. Price of ewes, $2; wethers, $3.50. Sold my wool for 1879 for 21 cents per pound, unwashed. It is profitable to keep sheep till 7 years old. Losses in my flock annually from natural causes, about 2 per cent.; no loss from disease, dogs or wolves. I herd in day, and keep in large corral at night; begin herding on grass about 10th of April, feed each day one ear of corn, or its equivalent in oats, till about April 20; after that depend entirely on grass, until latter part of October, when I commence feeding hay at night and continue sheep on range during day until about 20th of November, after which time I give all the hay they will eat and one ear of corn per day till spring. I feed to each head 1¼ bushels corn and 300 pounds of hay, which, with hay at $2 per ton, and corn 20 cents per bushel, makes feed cost 55 cents per head; add cost of herding and feeding, 25 cents per head, and cost of tobacco and dipping, 4 cents per head—making total cost for each sheep, 89 cents. Lambs are worth $1.50 per head; 5¼ pounds of wool at 20 cents, $105—making $2.55. Deducting 5 per cent. for loss, and 89 cents as cost of keep, it leaves as net profit on each ewe, $1.53. In my estimation, greatest drawbacks in Kansas are, the disease called scab, and want of attention. I consider that with proper care the profit in raising sheep is double that in raising cattle.

J. W. Harris, Cottonwood.—Have been raising sheep in Kansas since December, 1876; kept sheep for three years in New Jersey. Have now 214 ewes; original stock came mostly from Arkansas, a part were natives: are a cross of Cotswolds and Leicesters. Have rams from Wisconsin, and think they do as well as those raised here; think this cross best for all purposes. My flock of ewes has doubled in number each year. Fleeces

average 8 pounds. Sell my mutton at home for 8 cents per pound, dressed. Ewes are worth $3, wethers $4.50. My clip for 1879 sold for 20 cents a pound. Long combing wool most profitable, but it must be pretty fine. Think it most profitable to sell wethers at 2 years old; ewes may be kept with profit till about 5. I lose about 3 sheep out of 100 annually from natural causes; none by disease or dogs; wolves kill about 3 out of 100. My sheep are herded part of the time, and corraled at night. I feed about a ton of prairie hay to 12 head, and a bushel of corn or oats; the latter I think best for sheep, but if fed plenty of roots, grain of any kind is not necessary. I give all the turnips, beets, carrots, etc., that I can, and change food as much as possible, giving corn fodder once a day and oat straw once a week. Can winter 200 sheep so that the wool will more than pay all expenses, and the increase will be clear profit. My experience shows that sheep need large, roomy corrals, kept very clean and dry; and with plenty of good feed, one may have good, healthy sheep.

J. C. Dwelle, Cedar Point.—Have been engaged in sheep business here since February, 1877; had previous experience in New York and Michigan. Have now 280 head; original stock came from Missouri. Merino is best breed for all purposes. My flock increases about 100 per cent. per annum. Heaviest fleeces from my sheep weigh 24 pounds, lightest 5, average 10⅓ pounds. Mutton is sold at home for 8 cents. Sold my wool in 1879 for 17¼ cents; Merino most profitable wool. Sheep may be kept with profit till 6 or 7 years old. I lose about 10 per cent. of old ewes annually, but of young sheep less than 1 per cent.; none by disease or dogs; a few head by careless handling. My sheep are herded; corraled at night, though it would be better for them to be at liberty. Usually graze them on wheat in February and March, and give as much straw as they will eat. During hot weather graze them early and late, driving to shade in heat of day. Begin feeding a little corn as grass dries up. In winter feed straw, corn, Hungarian, and corn fodder. Manage to burn prairies in the spring, so as to give fresh, sweet grass. In New York sheep were subject to foot-rot; here, if corral is kept dry, there is no such disease. Give a little sulphur mixed with salt, and they will not have ticks or scab. Inexperienced and careless persons should be discouraged from sheep raising.

CHEROKEE COUNTY.

F. A. Gibbons, Baxter Springs.—For 2 years have raised sheep in Kansas; previous to that in southeastern Ohio; think that a better sheep country than this, as it has the advantage of grasses. Have 200 at present. From 500 to 600 may be successfully kept in one flock; my original stock of ewes came from Missouri and Arkansas; rams from Independence, Missouri. My experience, both in Ohio and here, shows the best grade for wool, for mutton, and for both wool and mutton, to be the cross of American Merino on common ewes. Average annual increase of my flock has been 80 per cent. I find Cotswold and Southdown most prolific. Maximum weight of fleece, 14 lbs., minimum 4¼, average 7 lbs. 5 oz. We usually market our mutton in Kansas City and St. Louis, with prices varying from 2½ to 4½ cents per pound, gross. Price of ewes, $1.50; wethers, $3. Sold my clip of 1879 for 18½ cents per pound. Most profitable grade is produced from a cross of American Merino on common ewes. Wethers should be sold when 2½ years old; ewes may be profitably kept till 4 years old. My losses annually are about 5 per cent. from natural causes; about 2½ per cent. by dogs; none by disease or wolves. My flock is herded, and corraled at night. Salt my sheep once a week, and feed 2½ bushels of grain to each 100 from October 1 to April 1; also feed hay, straw or corn fodder. Water regularly, and keep sheltered from storms. In hot weather they should be kept under low sheds from 11 A. M. to 3 P. M., as a protection against bot fly. I think goats should not be kept with sheep—they teach sheep to jump fences. I think greatest drawbacks in Kansas are diseases, such as scours, scab, and bot fly.

H. Cool, Keelville.—Have raised sheep in Kansas for 6 years; previously in same business in central Illinois; mild winters, dry, sandy soil, and cheap food, render Kansas superior to Illinois. My flock now comprises 180; 1,000 can be herded together, but 100 is as many as should be fed together. My original flock came from Illinois and Missouri. I find a cross of Cotswold or Leicester ewes with Merino bucks the best for wool; for mutton alone, Southdowns; for both wool and mutton, Southdown ewes with Cotswold or Leicester bucks. Average annual increase in my flock, about 50 per cent.; Southdowns are decidedly most prolific. Average weight of fleece, about 4 lbs. Our home butchers buy all our fat sheep at 2½ cents per lb., gross. I prefer to sell wethers as soon as they get their growth, rather than to keep for wool, and do not think it best to keep them after 3 years old; ewes will pay till 6 years old. Have lost about 3 head in 100, annually, from natural causes; none from disease. My sheep are herded in summer; confined in a corral at night. I give salt twice a week. Two bushels of corn and 300 lbs. of hay will winter a sheep in good order. I have a good shed, covered with hay, for protection in winter.

E. C. Wells, Messer.—In a small way have raised sheep here 5 years; previously handled them in Illinois. Have now 150 head; original stock of ewes came from Missouri, rams from Canada. Merinos are best for wool, Southdowns for mutton, and Cotswolds for both wool and mutton. Raise on an average one lamb for each ewe. Fleeces from my sheep average 5 pounds. Sell mutton in home markets for 2¾ cents, gross. My wool in 1879, brought 37½ cents, tub washed. Think it better to keep wethers until 5 or 6 years old for wool. Losses are very small; dogs causing most, killing 1 sheep in 20. My sheep are kept in a timber or brush lot in winter; have a large shed for cold and stormy weather. In summer, change pasture every two months; salt once a week. Millet or Hungarian is the best feed for sheep; in place of that give prairie hay, and corn in the ear. Think the net profit on my sheep is about $1 a head. One or two goats with each 100 sheep are an advantage—they keep off disease. Only drawback to successful sheep husbandry, *great number of dogs.*

Gilbert Allen, Stilson.—Commenced raising sheep here 2 years ago; previously in the business in Vermont and Wisconsin. Does not cost over one-third as much to keep sheep here as in either of those States. Have 200 head now; original stock from Wisconsin. Long-wool ewes and Merino bucks make best cross for all purposes. My sheep average 6 lbs. washed wool. Sold clip of 1879 for 28 cents. Medium wool most profitable. Most profit in keeping wethers till 5 years old for wool. Total losses in my flock will not exceed 3 per cent. per annum. In summer sheep run in pasture; are kept in a yard with good shed in winter, fed on corn and prairie hay. Think with good care sheep culture must be successful.

CLARK COUNTY.

S. B. Williams, Dodge City.—Have been raising sheep in Kansas 2 years; previously followed the business in Montana, Colorado, and New Mexico. Kansas has better and more plentiful grass and better water than Colorado, and is not troubled by scabby transient flocks driven over the range; climate here is much warmer than in Montana, and flocks are not disturbed by "greasers" as in New Mexico. I have about 2,000 at present; with one herder, 2,500 may be kept in one flock successfully. My ewes came from Chihuahua, Old Mexico, rams from Ohio. Rams from the East should be brought through early, and if possible a year before they are wanted, as they must be acclimated before they can do good work. Merino rams crossed on any breed of ewes make good wool, and for both wool and mutton are as good as can be found. Average annual increase of my flock, about 85 per cent. Have found Merinos most prolific. Average weight of my fleece from my half-breed sheep is 4 pounds; from three-quarter-breed, 5. Three-year-old wethers bring about $2.50, ewes $2 to $2.50. Sold my clip for 1879 at

Dodge City, for 16 cents per pound. Coarse ewes well graded up with Merino rams produce most profitable wool. Wethers may be profitably kept till 3 years old, and ewes till 6. I lose about 4 per cent. of my flock by snake bites and rosin weed; only disease I have seen among my sheep is scab. A good shepherd dog will keep off wolves and stray dogs. My sheep are herded during day; corraled at night. Have never fed hay or grain since I have been in the business; give my bucks oats and wheat during the working season, feeding about half a pound of each per day; after the season is over, give them a little corn each day till grass is good. Goats are a disadvantage with sheep, as they keep the flock continually on the move. Drawbacks to success in Kansas, cold, stormy winters and careless, good-for-nothing herders.

CLAY COUNTY.

Thomas Cogers, Clay Center.—Have been engaged in sheep culture in Kansas nearly 4 years; have had experience in raising sheep since boyhood in Dorsetshire, England; afterward in Iowa. Kansas far excels either of those places. In England, dampness of the climate is very detrimental, while the dry rolling prairies of this State afford excellent pasture land. Have at present 110. As to number that can be successfully kept in one flock, there is, with ample range, practically no limit; although a few can be kept more healthy than a very large number. My sheep originally came from Wakefield, in this county; were a cross between native ewes and imported Oxford rams. This breed proved a great success; had thought the Cotswolds would produce most profitable wool, but wool from my flock was better suited to the market. For mutton alone, Southdowns are undoubtedly best; while for both wool and mutton, Shropshire is most desirable. My flock has doubled in numbers every year. Shropshire and Dorsetshire are most prolific. Average weight of my fleeces, about 6 lbs. Clay Center is our market for mutton; price 3 cents per pound, gross. Price of ewes, $3; wethers, $4.50. Sold my wool of 1879 for 22 cents per pound. A medium grade of wool is most in demand. As to relative profit of keeping wethers for wool or selling for mutton, if I had range, should clip three or four times, and then fatten; wool raising is most profitable the first 3 or 4 years, and a wether is in his prime at 4 years old. Have lost no sheep from purely natural causes; a few have died from careless handling; none from disease, dogs or wolves. They are herded by day, and always shut up at night, except in very warm weather, when they are kept in a walled yard; during summer are kept on the prairies; as soon as grain crops are gathered, turned into the fields. I sow rye as soon as oats are gathered, and this makes excellent pasture. Feed good hay during winter from a rack, and if they have millet, will need no grain; if not, one ear of corn a day, or a pint of oats, will be sufficient. I have a stone stable, with a stone corral attached. Cost of my flock in July, 1876, was as follows:

40 ewes	$144 00	
1 ram	100 00	
		$244 00
Sold wool and lambs	$478 00	
110 sheep on hand at $3	330 00	
1 ram	100 00	
		$908 00
Actual profit		$664 00

I do not know of any drawbacks to successful sheep husbandry in Kansas.

E. Jones, Wakefield.—Have been raising sheep in Kansas for 10 years. Had experience in England. Kansas has a deep, dry subsoil, and dry weather, both very favorable to sheep; there can be no disease here unless brought in. My flock at present numbers 200. From 500 to 1,000 may be kept in one flock successfully. Original stock came from England; procured 1 ram from New York, but he did not improve for 6 months. Merino ewes crossed with Shropshiredowns are most profitable for wool; for mutton, a

cross of Shropshire and Southdowns; for both wool and mutton, Shropshires challenge the world. Average annual increase of my flock, 125 per cent. Shropshires are most prolific. Average weight of fleece from my sheep is 9½ lbs. Sell our mutton in Clay Center and Wakefield for 4 cents per lb., gross. Sold my wool for 1879 for 25 cents per lb. A medium grade of wool most profitable. Ewes may be kept with profit until 5 years old. My losses from natural causes are about 2 per cent.; no loss from disease, exposure after shearing, or dogs. Wolves have killed five head in the ten years I have had sheep; have lost only three head during that time from all other causes. They are herded during the day, and corraled at night. I commence herding in spring about 1st of April, get them out by 7 o'clock and in at sundown, changing feeding-ground as much as possible. As soon as grass begins to die in the fall, commence feeding corn, and give them good early-cut prairie hay. Only shelter I have is a shed cut out of the bank, with a hay roof, facing south. Greatest drawback to success that I know of is an inability to get enough sheep of the right sort. Most important thing is to keep them in a good dry place; corrals should be so arranged as to drain thoroughly. I have never seen any foot-rot among sheep here, and I believe if brought here it will cure itself. This is most certainly the healthiest place for sheep in the world. The same sheep will cut a greater weight of wool here than in England.

CLOUD COUNTY.

Henry Davis, Concordia.—Have been engaged in sheep husbandry here for 7 years; had no previous experience in the business. Have now 120 head; bought them in this State. From my experience, think a fine-wooled ram, bred to coarse-wooled ewes, will make best cross for both wool and mutton. My flock increase about 100 per cent. annually. Fleece from my sheep will average about 7 pounds; get from 2 to 3 cents per pound for mutton. Ewes and wethers will average $3. My clip of 1879 sold for 22 cents per pound. Think it best to sell wethers at maturity instead of keeping for wool. Sheep may be profitably kept to 4 or 5 years of age. Have never kept account of losses. My sheep are kept in an inclosure; corraled at night. Have a good dry shed for them in winter, and feed corn and hay, with plenty of water and salt. In summer they take care of themselves. Greatest drawback, in my opinion, is negligence of owners.

Joseph Hastetter, Glasco.—Have been raising sheep for 6 years in Kansas; previously handled sheep in Fayette county, Pennsylvania. Some of the advantages Kansas possesses over Pennsylvania are: less expense in handling, cheaper feed and pasture, a drier and more healthy climate, and shorter winters. Have now 650; obtained my rams in Pennsylvania and Wisconsin; ewes I bought in Kansas—the stock coming originally from Ohio. For wool I deem the American Merino most profitable; do not know what breed or cross would be most profitable for mutton; have always raised for wool, mutton being a secondary object; for both wool and mutton, should prefer a cross from Cotswold ewes with Merino rams. Average annual increase of my flock, about 90 per cent. of number of ewes. Maximum weight of fleece 25 lbs., minimum 2, average 8 lbs. 10 oz. Kansas City is our market for mutton. Price of ewes ranges from $2.50 to $4; wethers, $2 to $2.50. My clip of 1879 sold for 22¼ cents per pound. Most profitable grade of wool, long Merino. Keep my wethers for wool till they are 4 years old; good ewes may be kept profitably till they die. Losses in my flock from natural causes are about 1 per cent. annually, and same from all other causes. My sheep are herded through the summer; during middle of hot days, keep them in the shade; allow plenty of water and salt, and corral at night. During winter feed all the prairie hay they will eat, and a bushel of corn to each 100 head per day; also range them on the stalk fields and on prairie, in good weather; have good warm sheds in the corral, which are always open to them; never shut them up except during bad storms and at lambing-time.

Sheep eat about 1½ tons of hay per 100 head each month. Cost and profit of my flock last season was as follows:

490 head, at $3, (190 ewes)	$1,470 00
Interest 1 year, at 10 per cent	147 00
Herding 7 months, at $5	35 00
700 bushels corn, at 15 cents	105 00
35 tons hay, at $2	70 00
Shearing, 5 cents per head	25 00
Loss, 5 head, at $3	15 00
Total	$1,867 00
Spring of 1879, 650 head, at $3	$1,950 00
Wool, 4,191 lbs., at 22½ cents	932 50
Total	$2,882 50
Profit	$1,015 50

Being too poor to buy sheep is the only drawback I know of to successful sheep husbandry in Kansas. From my experience, I find that where a farmer takes good care of his sheep, it always proves a success, and I think it is to-day the best paying business in the country.

David Turner, Clyde.—Have been engaged in sheep raising 15 months in Kansas; kept a small flock in Wisconsin; consider Kansas much superior to Wisconsin. Have now 500 ewes and 300 lambs. From 1,500 to 2,000 will do well in one flock in summer, but in winter from 800 to 1,000 is enough. My sheep are part of the flock that belonged to the late George Grant, of Victoria, in this State. I think Southdown most profitable for wool; should not object to one cross of Merino; also consider Southdown best for mutton, and both wool and mutton, although I have a great liking for the Cotswold, which breed I intend to try. Increase in my flock last season was only about 60 per cent., for the reason that they were badly diseased with scab, which fact I did not discover when I bought them. This also reduced average weight of fleece to 3 lbs., and I received only 19 cents per lb. for it. Do not think it profitable to keep sheep after they are 6 years old. My sheep are herded on upland prairie during day, and corraled at night. Have long sheds built on the sunny side of timber, in front of which I have racks for feeding hay, so arranged that sheep can get to all sides. I feed one bushel of corn in the ear to each 100 sheep daily during 6 months of winter, and 3 lbs. of hay, on an average; their sheds are cleaned once a week, and, when weather is favorable, they are turned on the prairie a few hours daily; have access at all times to clear, running water. Owing to diseased condition of my flock, I lost money last season; yet am convinced that if a farmer will start with a sound, healthy flock, and take proper care of them, he will have greater returns than from any other investment. With a good supply of well-cured millet, there is no need of feeding grain; there should also be a field of early-sown rye, to turn lambs on when they are taken from the mothers.

COFFEY COUNTY.

David Stoolfire, Waverley.—Have been engaged in sheep husbandry in Kansas for 10 years; had experience in Pennsylvania. Dry atmosphere, and endless amount of feed, are among the many advantages of this State. Have at present 600; 2,000 fine sheep may be successfully kept in one flock; coarse sheep, not more than 100 to 200. My original flock came from Wisconsin. Think Merinos are most profitable for all purposes. Increase of my flock annually is 50 lambs for each 100 head of ewes for fine breeds, and 75 of coarse breeds. Average weight of fleece of fine sheep, 7 lbs.; coarse breeds, 4. Kansas City is our market for mutton, and fat sheep sell for $2.25 to $3 per head. Sold my clip of 1879 for 21 cents per lb., unwashed. Most profitable grade of wool is Merino. Wethers are profitable to keep for wool till 4 years old; not profitable to keep sheep after 6 years old. Losses from natural causes will average 3 per cent. a

year; I lose from 5 to 20 head each year by wolves. My sheep are herded, and corraled at night; commence about middle of October to feed corn, and increase quantity as grass decreases, till it reaches one bushel of shelled corn per day for each 100 head, together with all the hay they will eat; the hay should be of the very best quality. A good shed for protection is necessary, and there should be a trough with salt at all times under the shed; they should also have all the pure water they will drink daily. In my opinion, the only drawback to successful sheep husbandry in Kansas is poor feeding and general negligence. I am convinced that, with care and attention, any man with a flock of fine sheep can make money here.

W. A. Watt, Burlington.—Have been engaged for 2 years in sheep-growing in Kansas; no experience elsewhere. My flock numbers 675. Do not think more than 1,000 can be successfully kept in one flock. Obtained my original stock of ewes in Arkansas —rams in Kansas. Deem a cross of common ewes with Merino bucks most profitable for wool. Average annual increase of my flock, about 90 per cent. Average weight of fleece, 5 lbs. Ewes are worth from $2.50 to $3.25; wethers from $2.75 to $3. My wool for 1879 sold for 22 cents per lb., unwashed. Do not think there is profit in keeping wethers for wool. I sell them as soon as grown, say 3 years old; not profitable to keep sheep after 5 years old. My losses from natural causes are very light; none by disease, wolves or dogs. They are herded, and kept in a movable corral at night. In summer time, should be in charge of a good, careful herder, have plenty of good well water, and be salted twice a week; in winter, have good warm quarters, either sheds or a barn. Lambs and weak sheep should be kept by themselves. Ten tons of good hay and from 1½ to 2 bushels of corn per head, with the fodder, should be given them. In my opinion, the wool from a flock of sheep will more than pay expenses, leaving increase for net profit. I think the only drawback to success in this State is want of care. Do not believe it pays to bother with a small flock of sheep; there should be enough to keep a good man with them all the time.

Frank Fockele, Leroy.—Ten years' experience in sheep culture in Kansas; previously, 30 years in the business in Germany. Own 600 head now. Obtained original stock in this State. Improved Merino is best breed for wool and mutton. My flock increases 95 per cent. of the ewes. Common Missouri ewes are most prolific. Maximum weight of fleece from my sheep 16 lbs., minimum 8, average 12. Price of ewes, $3.25; wethers, $3. Sold my wool in 1879 for 20 cents. Fine medium wool most profitable. Pays best to sell wethers at maturity, instead of keeping for wool; ewes may be kept with profit till 5 years old. My losses from natural causes are about 3 per cent.; wolves, about 1 per cent.; no loss from other causes. In summer my sheep are herded; corraled at night. In winter, kept in a good warm shed, fed three times a day (corn once, hay twice, occasionally sheaf oats); at lambing time, ewes are fed some small grain or bran. Carelessness in handling is the only drawback in the sheep business. Cost of my sheep since December, 1876, is $528.50, receipts $403.03, and the flock is now worth $900.

J. B. Story, Leroy.—Began handling sheep here 3 years ago, without previous experience. My flock numbers 370; original stock from Ohio. Usefulness of rams brought from the East is not impaired the first season. Most profitable breed for wool is Merinos; Cotswolds or Leicesters are best for both wool and mutton. I raise about 85 lambs for every 100 ewes; coarse-wooled sheep are most prolific. Fleeces from my flock average 12 lbs. Price of ewes, $3.50; wethers, $2.75. My clip of 1879 brought 19½ cents. Medium fine wool most profitable. Ewes may be kept with profit till 7 years old, wethers till 4. My losses from any cause are very small, not more than 4 head out of 100. My sheep are herded, and corraled at night. First year the cost of sheep and keeping was $273; receipts from wool, etc., $399, leaving $126 profit from 73 sheep.

COWLEY COUNTY.

Ezra Meech, Winfield.—Have had but 1 year's experience here; was engaged 35 years in raising sheep in Vermont. Have 1,200 sheep, divided into four flocks; part of original stock were bred in Kansas, part came from Vermont. A cross between Mexican ewes and pure Merino rams, then again grading up with Merino, makes as good sheep for all purposes as any. Sheep brought here from the East, and as well cared for here as there, will do well from the first. As a rule it will not pay to keep wethers after 3 or 4 years old; ewes may be kept till 5 or 6. At this season my sheep are kept in a corral, letting them out 2 or 3 hours each day; feed a bushel of corn to each 100 head with millet one day and prairie hay the next; also feed some wheat straw; shall increase the corn to 1½ bushels to the 100, per day; corn is the best feed for sheep, and will produce extra wool. Shelter is very essential; they must be kept dry and protected from storms and cold winds.

CRAWFORD COUNTY.

Agesilaus Rockafeller, Cherokee.—Have been engaged for 10 years in sheep husbandry in Kansas; had some experience in northern Illinois. A great advantage in Kansas is short winters. Have at present 500 sheep. One thousand can be kept in one flock successfully. My stock of ewes was originally bought in Ohio and taken to Illinois, and from there to this State. My Cotswold rams were brought from Canada. I think most profitable cross for wool and for all purposes, is Cotswold bucks on Merino ewes. Average weight of fleece from my flock is, from ewes 6 to 8 lbs., from wethers 10 lbs. My clip for 1879 brought 32 cents per lb., clean. Combing wool is most profitable. It pays to keep wethers for wool until 4 years old; they will then fatten well, and should be sold for mutton. Ewes may be profitably kept until 6 or 8 years old. My loss by disease has been very small; a few have died from grub in the head, and but very few by dogs or wolves. They are herded in summer, and kept in shade in middle of the day; corraled at night. In winter, kept in corral, with open sheds; yard kept well littered; fed one ear of corn per day. When lambs are three weeks old, put oats in a trough that they can get at, and they will grow fast and quit the ewes early, and get in good condition for winter. I know of no drawbacks to successful sheep culture in Kansas.

William Lawler, Farlington.—Have raised sheep in Kansas for 5 years; had some experience in Illinois. Kansas has the advantage of plenty of cheap grass and high, dry ground, which is favorable to the health of sheep; but Illinois has the advantage of plenty of blue-grass, which makes late fall and winter feed. I have now 800. Two thousand can be successfully kept in one flock, if fed in three lots. My rams were bought in Illinois, ewes in Missouri. For wool, a cross of common ewes with Merinos is most profitable; for wool and mutton, a cross of Cotswold and Merino is preferable. Annual increase of my flock has been 70 per cent. Cotswolds are most prolific. Fleeces from my sheep will average from 3 to 5 lbs. Chicago is our market for mutton, and it brings 5 cents per lb., gross. Price of ewes, $3; wethers, $3.50. My clip of 1879 sold for 30 cents per lb., washed. Most profitable grade of wool, Cotswold and Merino mixed. Wethers should not be sold till full grown; ewes may be profitably kept till 7 years old; wethers not over four. Losses in my flock from natural causes are about 3 per cent., by dogs 2 per cent., and by wolves 1 per cent.; no losses by disease. My flock is herded in summer, corraled at night. In winter ewes should have at least 1 bushel of corn, and sheaf oats and hay; lambs should have all the sheaf oats they will eat. Profits on sheep raising are much greater than on cattle. Great drawback is failure to feed sufficiently; feed well, have good sheds and dry lots for winter, plenty of good range in summer, pay strict attention to lambs when dropped, and sheep farming will pay.

James Schofield, Beulah.—Have handled sheep here 3 years; had previous experience in Illinois; there they have tame grasses for pasture, which is the only thing Kansas

now lacks. My flock numbers 225; came from Illinois and Canada. Cotswolds are in my opinion best breed for all purposes. Fleeces from my Canada sheep averaged 11 lbs· Ewes are worth $5, wethers $3.50. My wool for 1879 brought 23 cents per lb.; combing wool most profitable grade. It will pay better to keep wethers for wool, rather than sell for mutton; will not pay to keep sheep after 6 or 7 years old. My losses from natural causes are about 5 per cent.; no loss from disease, exposure after shearing, or by wolves. Have only lost 3 in 3 years by dogs. My sheep are pastured, not corraled at night; they run in the pastures summer and winter; there is a large shed for protection from storms and from hot suns. I feed corn fodder, sheaf oats and hay; great drawback here is lack of blue-grass.

J. N. Braley, Girard.—Have handled sheep 12 years here; previously in Michigan and New York. Cheap grain and ample range are advantages in sheep raising here. Have 400 sheep now; can keep 1,000 or 1,500. Original stock obtained in Michigan. Spanish Merino and its crosses is best breed for all purposes. Annual increase of my flock is 30 or 40 per cent.; my sheep will shear from 4 to 5 lbs. Sell mutton at Kansas City for 3½ to 4 cents. My clip of 1879 brought 20 cents. Pays best to keep wethers till 4 or 5 years old, then fatten. Losses in my flock are about 2 per cent. from natural causes, 2 to 3 per cent. by disease, about 2½ per cent. each by dogs and wolves. My sheep are kept in pastures, give salt twice a week; in winter feed about 2 lbs. of hay per head, and a bushel of corn to the 100 head each day; have hay sheds, open to the south. Scab, worthless dogs and wolves are drawbacks.

DAVIS COUNTY.

James Tully, Junction City.—Have raised sheep here 7 years; had no experience elsewhere; have now 33 head; 200 can be kept in one flock successfully. Bought my sheep in Kansas; stock originally from Kentucky; they are Southdowns and Saxons; think Cotswolds best for wool. Average weight of fleece from my sheep is 5 lbs. Price of wethers is $3, ewes $3.50. Sold my wool in 1879 for 18 cents. Think it best to sell wethers at maturity, instead of keeping for wool; sheep cannot be kept with profit after 6 years old. Only losses in my flock have been by wolves—about 5 per cent. My sheep run at large during day, and are corraled at night. During summer they require no care, except to shut them up nights and salt once a week; in winter they require warm, dry sheds. Hay and oats are the best feed; give mine 2 bushels of oats a day, and all the hay they will eat. Tried goats with sheep, but they are a great nuisance, and a decided disadvantage. Wolves are the greatest drawback to success. In my judgment sheep are the most profitable stock that can be raised in Kansas.

William Ward, Junction City.—Have raised sheep 4 years in Kansas; had 50 years' experience in England and Michigan. Land being high and rolling, and climate so dry, gives this State great advantages for sheep. My flock numbers 300; small flocks are best, but 500 to 1,000 can be kept in one flock. Cotswolds and their crosses are most profitable for wool; Cotswolds and Shropshires for both wool and mutton. Fleeces from my sheep average 6 lbs. Mutton brings 5 cents per lb, gross, at Junction City. Ewes are worth $3, wethers $4. Long-wool grades are most profitable; only profitable to keep sheep till 3 years old. My losses from natural causes are about 1 per cent.; have lost a few by dogs and wolves; only disease in my flock has been something like catarrh in the head. Herd in summer on open prairie, during the day, and corral at night; in winter keep them up, except when weather is fine; have good warm sheds in the corral; feed them corn in the ear, with millet and prairie hay. My first lot of sheep came from Missouri; afterward bought some Colorado sheep, but do not like them, and should not advise anyone to get that breed.

DICKINSON COUNTY.

A. L. Evers, Dillon.—Began handling sheep here in 1873; had previously been in the business in Michigan. Sheep are not so liable to foot-rot here as in that State; feed is cheaper, climate drier, and winters shorter. My flock numbers 1,000; ewes were brought from Iowa, rams from Ohio; both did well the first winter, though brought in late in summer. Fine-wooled breeds, or some breed crossed with fine-wooled bucks, would be most profitable for wool. Have paid no attention to raising sheep for mutton. Increase in my flock has been from 75 to 80 per cent. Average weight of fleece 6 lbs. Eastern cities are our market for mutton; ewes and wethers selling for $3 per head. Received 20¼ cents for my wool in 1879; a medium grade of wool most profitable. Should keep wethers till fully matured, as the wool will pay all expense and leave a small profit. Sheep may be profitably kept till 6 years old. Losses by natural causes are about 1 per cent., disease none, dogs and wolves one-tenth of 1 per cent. each. My flock is herded during the day, and corraled at night; they are put on the range about middle of April; separate wethers and ewes; give salt and sulphur once in 3 days. Ewes should be sheltered in lambing time. From about October 1st commence feeding corn, and let them have corn or other grain all winter, at the rate of 1 bushel a day for each 100 head. This, with prairie hay, straw, stalk-fields, etc., will bring them out well, if they have good shelter. The total expense of my flock of 500 head, for 1878, was $565, and the wool sold and increase footed up $1,165, making a profit of $600. I find the greatest drawback to be expense of making proper sheds, and cost of feed in October and November, when prairie grass fails.

John Taylor, Chapman.—Raised sheep in Kansas 3 years; had no previous experience. Have now 367 head; ewes came from Missouri, rams from Ohio. Common long-wool ewes, crossed with Cotswold rams, produce most profitable wool; is also best cross for both wool and mutton. Fleeces from my sheep average 5½ lbs. Abilene is the market for mutton, and fat wethers sell for $4.25 each. Sold my wool in Cincinnati for 26 cents. It is best to keep wethers for wool till 5 years old; ewes may be kept till 8 with profit. Losses in my flock have been about 2 per cent. from natural causes, disease none; have lost a few by dogs and wolves this fall. Herd my sheep in summer, corraling at night; keep them on range from about middle of April to November 1. In winter let them run on wheat fields, about two hours each day, in suitable weather; have sheds, but they don't use the shelter much; salt once a week. Think sheep raised here are worth twice as much as those brought from Missouri. Great drawbacks, dogs and wolves.

John W. Hoover, Abilene.—Began raising sheep here 4 years ago; own 500 head now; 1,000 may be kept in a flock. Bought my rams in Kansas; cross between graded Merino ewes and Shropshire rams makes a good sheep for any purpose. My flock increases 100 per cent. annually; my fleeces weigh from 3½ to 15 lbs. Sold my wool in 1879 for 23 cents. Sheep can be kept with profit till 5 years old. I lose about 3 per cent. annually by natural causes, none by disease; only 2 head killed by dogs since the first year, but wolves killed about 3 per cent. this season. My flock is herded in summer, corraled at night; let them graze early and late, keeping in shade during heat of day. In winter keep them in a large lot, divided in three parts, one having a good tight shed, where they are kept at night; feed corn fodder, straw, and all coarse feed. Sheep raising has been more profitable than any other in which I have been engaged; anyone who will take care of his sheep can make it pay.

DOUGLAS COUNTY.

William Roe, Vinland.—Have been engaged in raising sheep here 6 years; had some experience in Canada; own 50 head now; have kept 200 in 1 flock successfully. Bought 12 Cotswold ewes and 1 buck in Jefferson county, Kansas; rest of my flock are common

Missouri ewes; most profitable sheep for all purposes are Cotswold grades. Annual increase of my flock has been about 85 per cent. Fleeces from the Cotswolds average 10½ lbs., Cotswold grades 7 lbs., and from common ewes 4¼ lbs. Price of ewes $3.50, wethers $4.50. My wool for 1879 brought 23 cents; Cotswold grades give most profitable wool. If I had plenty of pasture should keep wethers till 2 years old; ewes may be profitably kept till 4. Only losses I have sustained are from natural causes—about 5 per cent. My sheep are pastured and corraled at night; corral is dog-proof, and has good sheds, open to the south; tame-grass pasture for summer feed; give well-water to drink at all times; salt frequently; don't shear till warm weather has fairly set in; a few days after dip in a strong solution of tobacco, with sulphur stirred in, and in 7 or 8 days repeat the dipping. For winter feed give corn fodder, with the corn in it; also clover, timothy, prairie hay, and shelled corn in boxes; sugar beets are excellent. Three bushels of corn per head, with plenty of roughness, is fair feeding. It will cost about $1 a head to winter well. The cost of my flock is as follows:

Paid for sheep	$561 50
Pasturing	200 00
Wintering	503 00
Shearing	25 00
Interest	150 00
Total	$1,439 50
Received for wool	$573 90
For fat sheep	493 80
Ewes and bucks, for breeding	714 00
50 head on hand	200 00
Total	$1,981 71
Net profit	$542 20

Ignorance of the business, insufficient shelter, lack in quantity and variety of food, and neglect, are most fatal to success in sheep culture. Sheds and corrals should always be on dry ground, and arranged so that sheep may be fed in one part while cleaning the other. Clear water should always be easy of access, both summer and winter. In feeding, care should be used to very gradually increase the quantity in the fall, and decrease slowly in the spring.

T. S. McGee, Lawrence.—Have raised sheep here 3 years; never elsewhere; have now 36 ewes, purchased in Kansas. Think Cotswold best for both wool and mutton. Average weight of fleece from my sheep is 12½ lbs. My wool for 1879 brought 22 cents; combing-wool most profitable. Sheep may be profitably kept till 5 years old. Losses in my flock amount to only 6 head from natural causes, 2 killed by wolves. My sheep are kept in an inclosure, and corraled at night. I commence feeding grain about 1st of November—1 ear of corn per day—though oats are preferable. Give all the corn fodder they will eat; salt twice a week. The profit in sheep raising is 100 per cent. Goats help to keep sheep healthy.

Wm. M. Ingersoll, Lawrence.—Commenced raising sheep here 2 years ago; had no previous experience; have now 12 pure-bred Cotswolds. My stock of sheep came from Missouri; rams were bought here. I deem Cotswolds best for general purposes. Fleeces from long-wooled breeds average 10 lbs., from common sheep 3 lbs. My clip of 1879 brought 20 cents. Losses from natural causes about 5 per cent., dogs 20 per cent.; no loss from other causes. My sheep run in pasture during summer, though corraled at night. Have good sheds for winter; feed about half a pint of corn a day, with plenty of corn fodder and roots. Does not cost over 50 cents to winter sheep. Only real drawback, dogs, and lack of green feed in winter, though early-sown rye makes excellent winter pasture.

William Meairs, Lawrence.—Have raised sheep in Kansas 10 years; no experience elsewhere. Sold my flock last spring; they were bred from full-blooded Southdown ewes, by a thoroughbred Cotswold buck. This is the only cross I know anything about, and think it best for all purposes. My flock increased annually at the rate of 50 per cent. Average weight of fleece from the rams was 17½ lbs., from the ewes 8 lbs. My clip for 1879 brought 23 cents, at Lawrence. Six years is as long as it is profitable to keep sheep. Only loss from my flock was by dogs—30 out of 40 were killed by them in one night. My sheep for the last five years were kept at night in a dog-proof corral. In summer kept them on clover pasture; in winter fed all they would eat of corn fodder, hay, shelled corn, together with beets and turnips. Greatest drawback here is lack of protection against dogs.

Bernhardt Kramer, Eudora.—Have been raising sheep here nearly 6 years; have been familiar with the business from boyhood in Germany. Have now 350 sheep; original stock of ewes came from Missouri; rams bred in Kansas. A cross of Cotswold and thoroughbred Merino, their offspring again crossed with Cotswold, followed by a thoroughbred Southdown, will produce the best breed possible for any purpose in this country. Fleeces from my sheep average 6 to 7 lbs. Sell mutton at Lawrence for $3.10 per 100 lbs. My wool in 1879 sold for 22½ cents. Medium wool most profitable. Sheep should not be kept till more than 6 years old. Losses in my flock from all causes do not exceed 2 per cent. My sheep are herded; corraled at night. Feed corn and fodder; keep the racks full of prairie hay. Keep lambs, and wethers intended to be sold, in a lot by themselves, and feed them a little shelled corn. Have dry lots with good sheds in which to keep sheep. Expense of my flock for a year is $430, though we do nearly all the work ourselves. Wool brought something over $450; mutton, $400; raised as many lambs as we sold wethers, keeping the flock of same size. Wolves are the great drawback to sheep culture. Prefer Missouri or Kansas sheep to Colorado or Mexican; they have better wool, and are bigger. Do not think it pays to bring rams from Canada or other foreign countries; they are usually very high-priced, and frequently die in transit or by change of climate.

J. J. Bell, Baldwin City.—Have raised sheep here 15 years; previously in the business in Pennsylvania. Can produce wool here for half what it costs there. Have just sold my flock. Procured original stock of ewes in Missouri; bucks in Canada and Pennsylvania. A cross of Cotswold ewes with Merino bucks is best for any purpose. Sold my wool in 1879 for 20 cents. Have always herded my sheep in summer, and kept in a corral at night. Feed all the hay and corn fodder they will eat, with one ear of corn a day. Let them run on pasture in summer, with plenty of water and salt. Great drawback in sheep raising is negligence. Sheep are the most profitable stock a man can raise in Kansas.

T. W. Warren, Eudora.—Commenced raising sheep here 13 years ago; had some previous experience in Ohio and Illinois. Winters are not so severe, and there is no foot-rot here. Have 170 now; original stock of ewes from Missouri; rams from Indiana. Cotswold grades are best sheep for any purpose. Annual increase in my flock is 100 per cent. Fleeces from my sheep will average 6½ lbs. Lawrence and Kansas City are the markets for mutton, bringing 4 cents, gross. Sold my wool, in 1879, for 25 cents. Sheep may be kept with profit till 5 years old, though some ewes will pay to keep till 10. I lose about 2 per cent. from natural causes; by disease the same; dogs kill 1 per cent., wolves 2 per cent.; from other causes lose about 2 per cent. My sheep are kept in pasture; not corraled in summer. Have a large sheep pen, with good shed on north side; feed prairie hay in racks; feed shock corn; give about one ear a day from November 1 till lambing time, when I feed corn twice a day till grass comes. They have the run of the pasture for water and exercise. Great drawback is dogs.

Newton Henshaw, Hesper.—Began handling sheep here 5 years ago; tended sheep when a boy in North Carolina. Kansas has the great advantage of improved stock; and there is not one sheep killed here by dogs where there are ten in North Carolina. Have 60 head; original stock came from Missouri. Think Cotswold grades best sheep for any purpose. Fleeces from my sheep average 7 lbs. Sold my wool in 1879 for 17 cents. My sheep are kept in pasture; in summer run on clover and timothy or orchard-grass. In winter feed corn, with all the fodder and oat straw they will eat; occasionally give prairie hay. Have a good shed covered with hay. Previous to this season have fed but 2 ears of corn daily, but am now feeding 3 ears; believe I shall more than get back the extra feed in wool and extra lambs; think the extra wool alone will pay for the increased feed. Think sheep the most profitable stock a farmer can raise; they will clean a farm of weeds very quickly.

EDWARDS COUNTY.

J. D. Vernay, Kinsley.—Four months ago began handling sheep here; was previously in the business in Illinois. Have now 100; original stock came from Missouri. Cotswold crossed with Merino best for any purpose. Herd them on the prairie in day-time, corral at night; salt once a week; let them run on wheat part of the time; give no hay or other feed, as they have plenty of buffalo grass. Believe this portion of Kansas specially adapted to sheep culture, owing to climate, grass, absence of wolves, and the good health of sheep.

ELK COUNTY.

Thomas Myers, Western Park.—Commenced raising sheep here this season; had previously been in the business in Illinois. Among the special advantages Kansas possesses for sheep raising may be mentioned dry rolling prairie, abundance of good water and grass for summer pasture and for hay; but there is a lack of tame grass for fall feeding. My flock numbers 400. An unlimited number may be kept in one flock if range is large enough. My rams were bought in Linn county; original stock from Polk county, Missouri. My experience is, that the best cross for wool is common Missouri ewes and Spanish Merino bucks, then cross back with thoroughbred Cotswolds; this will also give best cross for both wool and mutton. Average weight of fleece, 8 lbs. Market for mutton is at home, and it brings from 2½ to 3 cents. Price of ewes $2, wethers $2 to $2.50. Fine wool most profitable. Think it best to sell wethers at maturity. Sheep may be kept with profit till 4 or 5 years old. Losses from natural causes are about 4 or 5 per cent.; dogs, slight. Wolves are troublesome, especially to young lambs. Sheep are herded during day-time, and corraled at night. In winter let them run, but in good weather; have good sheds that they can go under at all times; feed prairie hay, millet, and towards spring some corn; give salt twice a week in summer, and oftener in winter; sprinkle brine on their hay every two or three days. Greatest drawback is lack of tame grass for fall feed; also, trouble from wolves.

Hubbard Williams, Grenola.—Started in sheep business here in 1859; handled sheep in Missouri and Illinois. This State has the advantage of higher altitude and drier climate; water is better, not so much mud. Have now 560; stock originally from Wisconsin. For all purposes Merino is best. Fleeces from my sheep averaged 5 lbs. Sold my wool in 1879 for 18½ cents. Sheep can be kept with profit till 5 or 6 years old. My losses from natural causes are about 2½ per cent., wolves kill about 1 per cent., lose about 1 per cent. by other causes. In winter feed all the prairie hay, millet and straw they will eat; have no protection except hay piled along north side of fence in lot; costs about 35 cents a head to winter sheep. Tried keeping goats with sheep; found it a nuisance. Sheep should not be allowed to graze till after dew is off the grass.

ELLSWORTH COUNTY.

T. O. Fox, Ellsworth.—Have been raising sheep here since 1873; had some experience in Ohio. Some of the advantages to the shepherd here are: cheap pastures, a thoroughly-drained and drier soil, lighter and drier climate, and an entire absence of hoof-rot. Our flock numbers 2,400; ewes came principally from Iowa, though we brought some from Ohio, rams from Ohio; they were of no service the first year. For wool the Merino and its crosses is most profitable; for both wool and mutton Cotswold-Merino is best. About 90 per cent. is the rate of increase in my flock. Few sheep in my flock but Merino; fleeces average 8 lbs. Kansas City is our market for mutton, 3 cents, live weight. Merino ewes raised here are worth $3.50 to $4.50; Missouri, Mexican and Colorado ewes, $2 to $2.50. Sold clip of 1879 for 21½ cents; medium grade of wool most profitable. Do not consider it profitable to sell wethers for mutton before maturity; they may be profitably kept till 5 years old, ewes until they are "broken-mouthed." Loss from natural causes will not exceed 3 per cent.; disease, exposure after shearing, or dogs, no loss; wolves have killed about 2 per cent.; about 3 per cent. lost from other causes. The flock is herded every day in the year when it is possible, and corraled at night. Sheep should be on range in summer by sunrise, and allowed to graze till they go to shade and water of their own accord, which will be about 9 or 10 o'clock, and they will come out in time to get filled, so as to be corraled at dark. Salt should always be where they can get it at will. About November 1, when grass begins to fail, feed a little corn, increasing quantity gradually till December, when they should have full feed; hay is fed only in cases of storm or severe cold weather. Good sheds, covered with straw, and open south and east, give ample protection. Cannot give profits of whole flock, but from that under my own care (609 head) the profit was $919.73. Want of tame grass greatest drawback to success. Those intending to come to this State to engage in sheep husbandry should get here early in May, and provide good shelter and feed enough to take them through winter without depending on the range. By so doing there will be little trouble.

N. R. Maclean, Ellsworth.—Came here and commenced raising sheep in summer of 1876, my first attempt at the business. Have now 600; from 1,000 to 1,200 may be successfully kept in one flock. My original stock of ewes came from some Eastern States—rams from Ohio. A coarse-wooled ewe crossed with a fine ram will produce best wool. Southdowns excel for mutton; for wool and mutton, Southdown crossed with Merino is best. Annual increase of my flock, about 50 per cent. Fleeces from my sheep average 8 lbs. Market for mutton is here, at 12½ cents, retail. Price of fine-wool ewes is $5; wethers, $2.50 to $3.50. My clip of 1879 brought 20 cents. Fine wool most profitable grade. Fine-wooled wethers should be kept for wool, but coarse ones should be sold for mutton; sheep should be disposed of when 6 years old. Loss by natural causes last year, 15 head; by disease, exposure after shearing, or by dogs, none; wolves killed 2, and 8 were lost from other causes. Sheep are herded during summer, and corraled at night. During winter feed about half a bushel of corn each morning, then let them run to wheat straw or in the stalk-fields; should straw give out, feed hay; have a shed covered with hay. I bought 300 sheep at first, afterward 75 more, at $3.50 a head; have sold wool and wethers enough to pay first cost of flock and $217 more, and also have 600 on hand. Too many try to raise sheep here without looking after them; anyone giving necessary attention can make it a success.

T. J. Grover, Bluffville.—Have raised sheep 3 years here; previously in the business in California. Have 500 head; original stock came from Missouri. Sold my wool in 1879 for 20 cents. My sheep are herded and corraled at night; in winter fed millet hay and corn.

M. D. Morse, Ellsworth.—Commenced sheep business here in April, 1879; had raised

sheep in Ohio. Have now 600 head; native Kansas sheep with rams from Ohio. Believe Merino best for wool and mutton. Average weight of fleece from my flock, 6½ lbs. Sold my wool in 1879 for 21½ cents. Think 5 years old as long as profitable to keep sheep. Herd in summer, corraling at night. About middle of November separate lambs and commence feeding.

Robert Hudson, Ellsworth.—Have been engaged in sheep raising here 2 years; was born in Scotland, and among sheep from the time I was large enough to do anything; have also had experience in Canada. Have now 245 head; they are native sheep. A cross of Leicester bucks with Merino ewes is best for both wool and mutton. Sold my clip of 1879 for 20 cents. Believe sheep the most profitable stock a man can raise.

FORD COUNTY.

John Pohl, Dodge City.—Commenced raising sheep here 2 years ago; had some previous experience in New York. Have now 400 head; 2,000 can be kept in one flock. Merino and Cotswold are most profitable breeds for any purpose. My flock increases annually about 90 per cent. Average weight of fleece is 4½ lbs. Not profitable to keep sheep for mutton after 2 years old; for wool they may be kept till 4. Losses from all causes are about 2½ per cent. My sheep are herded; corraled at night. Do not have to feed in winter. Goats are good leaders for sheep; about 5 to 1,000 are enough.

B. W. Tarbox, Speareville.—Began to raise sheep here a year ago; had tried the business 5 years in Colorado and 2 years in Texas. There is more grass on one acre in Kansas than on three in Colorado. Have 7,000 head now; original stock came from Missouri. Most profitable for all purposes is Merino. My flock increases 85 per cent. of breeding stock annually. Fleeces average 6 lbs. Price of ewes, $2 to $5; wethers, $2 to $2.25. Sold my wool in 1879 for 21 cents. Ewes may be kept with profit till 6 years old, wethers till 4. My losses by natural causes are about 5 per cent.; wolves have killed about 50 head; have no other losses. Have never fed our sheep during winter except the rams. Herd on the best grass we can find, and where there is plenty of good water. In winter, divide the flock into herds of about 1,500, and graze in separate places 4 or 6 weeks at a time. Only drawback to successful sheep culture is neglect. Good sheep pay a large profit; but Mexican sheep will hardly pay, as there is but little money in herding a sheep a year for two pounds of ten-cent wool and a lamb of the same style. Good sheep well cared for will pay more than 30 per cent. The dry counties of western Kansas make the best place to raise this stock.

Rittenhouse & Slaven, Speareville.—Commenced raising sheep here about a year and a half ago; no experience elsewhere. Have 900 sheep in one flock, 800 in another. About 1,000 may be kept successfully in one flock. Procured our rams in Kansas, ewes from New Mexico. Most profitable breed for wool, Merino, or any long-wooled sheep crossed with Merino; for mutton, Southdown; for both, Merino crossed with Shropshire. Average annual increase of our flock is 85 per cent. Maximum weight of fleece 6 lbs., minimum 2, average 3½. We get about $2 a head at home for mutton sheep. Price of ewes, $1.75 to $2.50; wethers, $1.75 to $2.00. My clip of 1879 brought 18 cents. Most profitable grade of wool, American Merino. Sheep may be profitably kept till 5 years old. Losses from natural causes are about 1 per cent.; by wolves, about the same. The flock is herded in day-time, and corraled at night. As soon as done lambing, and sheared, are sent on prairie, and kept on good grass, with plenty of water, till snow falls, or as long as possible to keep them from winter quarters. In winter, feed about 6 bushels corn to 100 head per day; if snow is on the ground, hay is necessary; we have a sod corral, partly covered with hay. We consider that the wool sold pays all expense of keeping, and that the 800 lambs are clear profit; they are worth $2 per head. It is an advantage to keep goats with sheep to lead them across streams; two to a flock is enough. No drawback to success in this part of Kansas.

FRANKLIN COUNTY.

John B. Feagles, Ottawa.—Brought my sheep here 5 years ago; had raised sheep in Ohio and in Michigan. Kansas has the advantage of a drier climate, milder winters, and cheaper feed and shelter; disadvantages, lack of tight fences, tame pasture, home factories for working up wool, and too many dogs and wolves. My flock numbers 360, with 220 lambs. From 1,000 to 1,200 may be kept successfully in one flock, but half that number is better. My original stock came from Ohio; have used Ohio and Vermont rams without any trouble. For wool, American Merino is best; for mutton, Canada or Kentucky mutton sheep is first choice; both wool and mutton, full-blooded Merinos. My flock has increased about 70 per cent. of number of ewes. Maximum weight of fleece 28 lbs., minimum 5, average 8. Mutton brings from 3½ to 4½ cents per lb. in Kansas City and St. Louis. Price of ewes, $3; wethers, $3.50. My clip of 1879 brought 21 cents at home. Fine medium wool most profitable. Think it pays better to keep wethers till 6 years old for wool than to sell younger for mutton; ewes may be kept with profit till they die. About 5 per cent. of losses occur from natural causes; no loss from disease, or exposure after shearing; dogs kill about 5 per cent., and wolves get some lambs about dropping time. Flock is herded days and corraled nights; kept on range in summer as long as grass is good, and in winter put in a yard with a shed covered with hay, and fed with corn and prairie hay. Expense has been about 40 cents per head the year round; increase has paid all cost and left me 80 cents a head for profit. Think goats with sheep the greatest nuisance in the world. Lack of attention, and dogs, are the great drawbacks to profitable sheep raising.

HARPER COUNTY.

J. T. Botkin, Harper.—Have been in the business 3 years in Kansas; had previous experience in Illinois. Climate is good here—soil dry, and foot-rot not prevalent; winters short. Have 400 head now. Can keep 2,000 successfully in one flock in summer. My original flock came from Missouri; had a ram last winter from Michigan that did good service. Believe Spanish Merino most profitable for wool; Southdown for mutton; for both, Merino, if well bred. Increase in my flock, about 80 per cent. annually. Average weight of fleece, 6 lbs. Have sold but few mutton sheep, and those at 3 cents per pound. Price of ewes, $3; wethers, $2.50. My wool for 1879 brought 20 cents. Cotswold wool brings highest price now, yet in my opinion Merino is most profitable. Pays better to keep wethers for wool than to sell for mutton, but not until they get too old to fatten; sheep may be profitably kept until 6 or 7 years old. Losses from any cause are so small that they cannot be counted. My flock is herded all summer on prairie, salted every week, and corraled at night; when grass dries up, are put in a yard with ample room, and care taken to have plenty of water. About 2½ or 3 bushels of corn, with plenty of fodder, hay, etc., will winter a sheep in good shape. Have not used sheds yet, but would prefer them if not made too tight. Have found sheep more profitable than any other stock. In driving sheep it might sometimes be an advantage to have a goat to lead, especially in crossing water-courses. Lack of tame grasses for fall pasture is the greatest and perhaps the only natural drawback to success here. At this writing (Dec. 5) my sheep are on the range, with no feed but the buffalo grass, and they are fat—the wethers in good shipping order.

A. Minor, Harper.—Have been handling sheep here nearly 2 years; had some experience in Virginia and Illinois. Own about 100 head; raised in Kansas. Think a cross of Merino and Cotswold or Southdown would be most profitable for both wool and mutton. Sell my mutton at home for 3 cents. Price of ewes, $2; wethers, $3. Sold my wool in 1879 for 18 cents. Long wool most profitable. Most profitable to sell wethers for mutton, rather than keep for wool. Lose about 5 per cent. annually by natural

causes; dogs kill about 20 per cent., wolves get a few lambs. My sheep are herded in summer; feed about a bushel of corn per day to 100 head in winter.

James A. Hammers, Anthony.—Began to handle sheep here in October, 1878; had 15 years' experience in Illinois; that State is so muddy that sheep are liable to foot-rot, which is not possible with the high rolling land, sandy soil, and fine dry climate of Kansas. Have 625 head; partly from Illinois, partly natives; had no trouble with rams brought from Illinois on account of climate. A cross between Merinos and Cotswolds is best for any purpose. My sheep are herded on the prairie in winter as well as summer; have a good shed in corral for protection from storms; expect to feed some corn in February and March, but no hay. Up to this time they are doing well on the prairie.

Henry M. Boyle, Anthony.—Commenced the sheep business here 3 months ago; had a little experience in Illinois. Have 112 head, brought from Arkansas. A cross of Cotswolds and Merinos is most profitable for wool and mutton. My flock is herded; corraled at night. They do well in this section on range summer and winter, feeding on buffalo grass; will winter through without feed, though I think it pays to give grain, as the difference in thrift and increased wool will more than pay for extra feed. If sheep are kept in one corral long, think it a good plan to plow the ground. Have a windbreak and shelter on north and west of their lot.

HARVEY COUNTY.

H. Mathies, Halstead.—Have had 5 years' experience in sheep culture here, and some years in central Iowa. Points in favor of Kansas for sheep raising are, mild, dry climate, less cold rains in lambing time, great variety of rich grass, longer time for grazing, and less feed required. My flock numbers 750; original stock came from Illinois and Missouri; prefer Kansas sheep. Merinos are most profitable for wool; for mutton, Cotswolds crossed with Southdown; for both wool and mutton, Merino ewes crossed with Cotswold bucks. Fleeces from my flock average 5 lbs. Ewes are worth $2.50 to $3. Sold wool of 1879 for 25 cents. Most profitable wool is from long-wooled Merinos. Should never sell wethers before maturity. Sheep may be profitably kept till 5 or 6 years old. No losses from other than natural causes, about 3 per cent. annually. My flock is herded, and corraled at night. During summer, are kept on open prairie; watered once a day. Have salt in a trough in corral at all times. Have a good shed, open to south, in winter, feed about 5 bushels of corn a day; sometimes feed straw, but usually hay, giving all they will eat; in nice weather, often turn them on the prairie. The flock has cost about $1,068; expenses, $302; total, $1,370. Receipts to date, $2,315; present value of flock, $2,085; total, $4,400. Deduct cost, $1,370; net income, $3,030. Want of shade in summer, and carelessness on the part of owners, are the drawbacks to successful sheep husbandry.

W. H. Hurd, Sedgwick City.—Have been raising sheep 4 years in Kansas; had previous experience in New Hampshire. Have now 2,100, in two flocks; my rams are bought in Wisconsin and Michigan; part of my old stock came from Missouri, and part from Colorado. Think Colorado stock preferable to start from—they have better constitutions and are freer from disease. Merino sheep are most profitable for all purposes. Maximum weight of fleece from my sheep was 28 lbs., minimum 4; average of Missouri sheep 4, of the Colorado 3, of the first cross 5¼. Sold my wool of 1879 for 25 cents. Most profitable grade of wool is a "long, dense, fine fiber." Don't think it profitable to keep sheep after 6 years old. Losses from natural causes, about 5 per cent.; dogs and wolves, about half of 1 per cent. each; from carelessness, 4 per cent.; no loss from disease. Herd my sheep, and fold every night. Feed 10 tons of hay to each 100 and 1 bushel of corn per head in winter; millet cut green has proved a valuable feed; feed all the straw from grain grown on the farm. Have one goat trained to lead sheep, he is a great help; for any other purpose, goats are a nuisance. Long, dry falls are great drawbacks to suc-

cessful sheep raising, as prairie grass dries up, and we have not yet tame grasses for pasture.

C. T. & J. R. Matthews, Newton.—Commenced raising sheep here April 1, 1878; previously in the business in Wisconsin. Advantages in favor of Kansas are: cheapness of land, shorter winters, extensive range, earlier grass in spring. In Wisconsin, they have tame-grass pasture for fall feeding. We keep from 1,000 to 1,300 head; can keep 1,500 in a flock successfully, but smaller flocks do better. Bought our stock here, but they came originally from Missouri, rams from Wisconsin; they needed no more care than those acclimated. We are crossing Missouri ewes with Lincoln and Cotswold to get the best wool, and believe this will be best cross for all purposes. Average weight of fleece, 5 lbs. Mutton sells for 3 cents per lb., gross. Was offered 23½ cents for wool crop of 1879, unwashed. Medium-grade wool most profitable. Wethers may be kept for wool till 3 or 4 years old; ewes to 6 or 7. Loss from natural causes is very small; no loss from disease, dogs or wolves. In summer months, the flock is herded, and corraled at night; in winter, kept in a tight board pen—have no sheds; think a good windbreak all that is necessary; expect to feed one bushel of corn each, and all the hay and straw they will eat. We have always kept goats with sheep, and now have 16—Angora and Cashmere; believe they promote the health of the sheep. Only drawback to the business here is "neglect;" sheep require care. We bought sheep here, instead of in Colorado or Missouri, because they were free from disease, and we had never seen a flock brought in that were sound; we saved much annoyance and loss by getting sheep that had been wintered here.

GREENWOOD COUNTY.

A. H. Thompson, Ivanpah.—Went into the sheep business here two years ago, without previous experience. Have now 1,339 sheep; partly native, the rest from Illinois. Last fall got bucks from Ohio and Michigan; they were not as vigorous as natives. Think Eastern sheep must be acclimated, and the best time to import is late in fall, and at once give full feed. Merinos, as near full-blood as may be, are best sheep for any purpose. Increase in my flock is about 90 per cent. of breeding ewes. Fleece from my sheep averaged 8 lbs. Kansas City and St. Louis are our markets for mutton, bringing about 3 cents, gross. Sold my wool in 1879 for 22 cents. Wool graded XX or medium fine is most profitable. Wethers may be kept with profit until 3 years old, ewes until 6 or 8. My losses from natural causes are about 2½ per cent.; but few by disease; stretches and palsy killing more than all other diseases; none by dogs, and but one-sixth of 1 per cent. by wolves. In summer, the flock is herded on the range; corraled at night. When ewes drop lambs they are put in pasture. In winter, feed corn both in the ear and shock, prairie hay and millet; give lambs shelled corn, oats, hay and millet; salt each week.

JACKSON COUNTY.

Wm. Wardin, Douglas Township.—Have raised sheep here one year; never tried it elsewhere. Have 650 now; think 1,000 may be kept in one flock successfully. My ewes came from Iowa; bought rams in Kansas. Half to quarter-blood Merino gives most profitable grade of wool; for mutton, Southdown is best; for both wool and mutton, Merino crossed with Southdown. Maximum weight of fleeces from my sheep, 16¾ lbs., minimum 3½, average 7. Topeka is our market for mutton; price now, 3½ to 4 cents, gross. Sold my wool in Philadelphia for 27 cents. Combing and delaine wools are most profitable. Only losses incurred are about 5 per cent. from natural causes; half of 1 per cent. by dogs, and 1 per cent. by wolves. My flock is herded in summer, confined at night. In winter, kept in corral all the time, except when being watered; have hay-covered sheds for shelter. Last winter, fed 75 tons hay and 1,000 bushels corn. Drawbacks to success are, the disease called scab, and changeable weather.

C. P. Allison, Hoyt.—Have been engaged in sheep raising here over 4 years; have been in the business all my life in Ohio. Have now 2,200 sheep; most of the original flock I brought from Ohio; found no difficulty with the rams from acclimation; if there was any difference, it was for the better. Think Merinos are best breed that can be raised for any purpose. My average increase has been about 70 per cent., but think it will be as much as 80 this season, as I have better facilities for taking care of the lambs. Fleeces from my sheep average 7½ lbs. Sold my wool in 1879 for 20 cents. Fine wool most profitable. Wethers pay best to keep for wool till after 4 years old; ewes should be sold at 7 or 8. Losses from natural causes are about 2 per cent. annually; disease, none; dogs and wolves, about 15 head in two years. My flock is herded during the day, and corraled at night, in the summer time; watched carefully all the time; give salt, with a little sulphur added, three times a week; allow free access to water and shade in hot weather. In winter shelter all my sheep from storms, making them as comfortable as possible; give them plenty to eat; drive to water every day, unless very stormy; if pleasant, turn them on the range two or three hours; give corn and hay; about 1½ or 2 bushels corn to the 100, and all the hay they will eat. My sheep have averaged a net profit of $2 a head. Great drawback to success is bad management. Sheep require constant and faithful attention, and judicious management, to be made successful.

JEFFERSON COUNTY.

James O'Neill, North Lawrence.—Have been raising sheep here 10 years; had many years' experience in Canada; have no sheep at present. Cotswolds, Leicesters or Lincolns, either pure or crossed on native ewes, are best for all purposes. Increase in my flocks was about 3 lambs to 2 ewes; fleeces would average from 10 to 12 lbs. Lawrence is the market for mutton, bringing 6 cents, gross; combing-wool most profitable to raise. Sheep may be kept profitably till about 4 years old. Losses from natural causes from 3 to 4 per cent., dogs 2 to 3 per cent., wolves from 5 to 7 per cent. Sheep must be herded and corraled at night. In winter they should be kept in large, roomy yards, with hay-covered sheds, opening south, that they may go under at pleasure; feed hay, corn fodder and millet, and about 2 ears of corn each per day. Breeding ewes should be kept by themselves the last month or six weeks, with extra feed. Wolves, dogs and wild-cats are the great enemies of the sheep raiser. Were it not for these, the business would pay better than any other requiring same care.

R. L. Gilbert, Chester.—Have raised sheep 3 years here; never was in the business elsewhere. Have 39 head now; they are Missouri ewes, part Merino; think common ewes crossed with Cotswold best for any purpose. My ewes shear from 4 to 10 lbs., bucks 13 lbs.; mutton brings about 3 cents, gross. Price of ewes and wethers, $3. Sold my wool in 1879 for 21 cents; most profitable grade of wool is from a cross between common ewes and thoroughbred bucks. Losses from natural causes have only been 1 sheep out of my flock each year; none from dogs or wolves. My sheep are kept in a pasture, and put up in a close pen at night; have good sheds that they can run under at pleasure. Dogs and wolves are the greatest drawback to sheep raising.

Val. Brown, Thompsonville.—Have been raising sheep in Kansas 8 years; had some experience in Ohio. Have now 100, brought from Ohio; they have been healthy, and rams did well first season. A cross of Cotswold with common sheep makes a very fine grade for both wool and mutton. Increase in my flock has been about 80 per cent. of ewes; Southdowns are most prolific. Heaviest fleece from my sheep weighed 16 lbs., lightest 6, average weight 9. Sell mutton at Topeka, Lawrence and Kansas City, for 4 to 5 cents, gross. Sold my wool in 1879 for 22 cents. Pure Cotswold most profitable wool. Wethers should not be sold before maturity, as the growth and wool pay a large per cent. over the cost of keeping. Lose about 2 per cent. annually by natural causes; about

4 per cent. each by dogs and wolves. My sheep are kept in a pasture in summer; corraled at night; they require but little attention besides opening and shutting the corral gate, and giving them salt. About October 1, when prairie grass begins to fail, they will require a little grain or corn fodder. In winter, have a shed into which they go at will. Feed with corn or oats, and plenty of hay or fodder. Cost of keeping my sheep has averaged $1 a head per year, and the sales of wool and sheep have averaged $3.61 per head, with an average increase of the flock of about 40 per cent. Great drawbacks to sheep culture are dogs and wolves.

T. McIntosh, Oskaloosa.—Have raised sheep here 9 years; had some experience in Iowa. Own 200 head now. Original stock obtained in this State. Long-wooled breeds, such as Cotswolds and Leicesters, are best for both wool and mutton. My ewes average about a lamb apiece. Average weight of fleece from my sheep is a trifle less than 7 lbs Sell mutton at home for 3 cents. Sold wool in 1879 for 22 cents. Long, fine wool most profitable. Wethers may be kept until 3 or 4 years old; ewes until 7. Lose from 2 to 3 per cent. of my flock annually by natural causes; dogs kill about 2 per cent.; wolves this year got 3 per cent. My sheep run on prairie in summer; kept in a dog-proof corral at night. Turn them on tame pasture towards fall, and when this begins to fail commence feeding prairie hay, millet or clover, increasing the hay until they have all they will eat. As cold weather comes on, feed a little corn, gradually increasing quantity until they get an ear apiece each day; give corn morning and night, and all the hay they will eat clean; salt twice a week in summer, and once in winter. Last year I had 148 sheep, worth $333—sold wool for $203.28; mutton, $31.50=$234.78; and have now 208 head, worth $600. Dogs and wolves are great drawbacks here to success in raising sheep.

JEWELL COUNTY.

A. Wyland, Jewell City.—Brought a small flock of sheep to Kansas 8 years ago; they did well the first season; were a cross between common ewes and pure Merinos. Wethers sheared from 5 to 9 lbs., ewes 3 to 6. Wool brought from 18 to 25 cents. In winter, I feed corn fodder principally, with a little grain, and let sheep run at large as much as possible. In summer, herd during day, corraling at night. For four years have let my sheep out on shares; by selling off old sheep each year, so as to keep about the original number, I get a return of about 30 per cent. on the money invested. Sheep cannot be profitably kept after 6 or 7 years old. Do not think the best high-bred sheep pay so well as those bred from common ewes by some of the thorough breeds, as the cross is much more hardy. Best time for lambs to come is in April and May, as then grass is high enough to give good feed for the ewes. It is a good plan to sow rye for late fall and early spring pasture.

L. F. Berry, Jewell City.—Have been raising sheep in Kansas 4 years; had some experience in Pennsylvania, but owing to high price of feed and hard, long winters, never realized anything there; short winters and cheap feed here are very much to the advantage of sheep raisers. Have 300 head at present; original stock was from Missouri. Believe Southdown and Merino most profitable to raise for any purpose. Annual increase of my flock has been about 34 per cent. Merinos are most prolific. Maximum weight of fleece from my sheep is 12 lbs., minimum 4. Ewes are worth $3; wethers, $4. Sold my wool of 1879 for 19¼ cents. Medium grade of wool most profitable. Losses in my flock from natural causes about 12 or 14 per cent.; none from disease or wolves; very few in four years by dogs. The sheep run at large, and are not confined at night during summer; have a good shed, which they use at will; in winter, feed prairie hay, millet and corn. Cannot give figures for cost of keep. Drawbacks to successful sheep husbandry are: want of range in this county; want of money to get a start with; negligence on part of sheep owners.

J. L. Anderson, Brown's Creek.—Four years ago began raising sheep here; previously

in the business in Missouri. Have 170 now; brought original stock of ewes from Missouri, bucks from Canada. For wool, Merino is best; both wool and mutton, Cotswold and Southdown crossed. My sheep increase annually about 75 per cent. Fleeces from my flock average nearly 7 lbs. Sell mutton for home consumption at 2½ to 2¾ cents. Price of ewes, $3; wethers, $3.25. Sold wool in 1879 at 23 cents, in dirt. Medium wool most profitable. Sheep may be kept with profit till 6 years old. Losses from natural causes about 1 per cent.; no losses from other causes. Herd during day, and corral at night; have good sheds made of straw; let them go to shade in heat of the day in summer; in winter, feed corn night and morning; turn in stalk-field a short time each day, as much for exercise as feed. Want of tame grass is a drawback; groves for shade would be an advantage; both can be had with a little trouble.

JOHNSON COUNTY.

G. W. Graves, Gardner.—Have had about 13 months' experience here. My flock numbers 50; came from Missouri. Believe the Cotswold to be the best breed for general purposes. Mutton is worth 3 cents, gross. Ewes are worth $2; wethers, $3. Received 25 cents for my wool in St. Louis. My sheep are kept in a pasture during summer. Do not think corn good feed for sheep; it will cause the wool to fall off; timothy and clover hay with a small quantity of oats makes best feed. I believe sheep can be raised here with better profit than any other stock.

George Bolton, Olathe.—Have been raising sheep here 3 years. Have 35 head graded ewes, bought in Leavenworth county; bought my ram, a Cotswold, at Kansas City. Think Cotswold or Leicester best breed for general use. Raised 77 lambs from 68 ewes. Fleece from my sheep averages 7 pounds. Ewes are worth $2.50. Obtained 19½ cents for my wool in 1879. Cotswold most profitable grade of wool. More remunerative to sell wethers at from 2 to 3 years old. Sheep may be kept with profit till 5 or 6 years old. I have lost 1 sheep in 2 years from natural causes; dogs killed 7; wolves, 5; lost none from disease. My sheep are kept in a pasture in the day-time, at night confined in a house secure from dogs and wolves. I feed in winter, corn, oats, clover, timothy and corn fodder; the better they are fed, the better the fleece is; costs about a dollar a head to winter them.

T. Anderson, Wilder.—Have had a small flock of sheep here 8 years; had previous experience in Wisconsin. Have fifty head now; original stock from Missouri; last season got a Cotswold buck from Illinois, that did well. Think Cotswolds for wool and Southdowns for both wool and mutton are best. With care, my flock will nearly double each year; Cotswolds are as prolific as any breed. Fleeces from my sheep average 7 lbs. Mutton sells at Kansas City and Olathe for 3 to 4 cents, gross. Received 23 cents for wool in 1879. Combing-wool most profitable. Sheep may be kept profitably until 5 or 6 years old; should then be fattened and sold. My losses from natural causes, about 3 per cent.; none by disease; dogs kill about 6 per cent., wolves about 3. My sheep run in a woods pasture during summer, and are very little trouble; in winter I feed two ears of corn a day, with plenty of hay; sometimes give ground feed, and occasionally turnips or mangel wurtzels. No drawbacks to successful sheep husbandry in Kansas.

M. H. Cogswell, Hector.—Have been engaged in sheep husbandry here 2 years; previously had experience in Illinois. Dry climate and freedom from mud give Kansas great advantages. Have just sold my flock; original stock came from Kansas City. Consider pure Merinos, or a cross of them with Cotswold rams, best for wool; Cotswolds or Leicesters best for mutton; for both wool and mutton, Cotswold ewes crossed with Merino. Average increase of my flock has been 80 to 90 per cent. Ewes are worth $2, wethers $2 to $5. Sold wool in 1879 at 21 cents. Do not think sheep can be kept with profit after 6 or 7 years old. Losses from natural causes not over 2 per cent. annually; by dogs about one-half of 1 per cent.; none by disease or wolves. My flock run in pas-

tures; not confined at night. Sheep will care for themselves as well as any stock; should have good range and plenty of salt, with wood ashes mixed in it; the latter promotes health. In winter, feed with timothy and clover, with a little grain. Have never kept an account of profit and loss, but have always made more on sheep than on any other stock.

Henry Rhoades, Gardner.—Have been raising sheep here 2 years; had some previous experience in Indiana. Have now 108 head; original stock came from Missouri; Cotswold crossed with Merino most profitable for general use. My flock has increased about 75 per cent. annually. Fleeces from my sheep averaged 8⅓ lbs.; maximum weight 16½, minimum 3½. Market for mutton, Olathe; 3½ cents, gross. Ewes and wethers are worth $2.50 each. Sold my wool in 1879 for 21½ cents; profitable to keep sheep till 5 years old. My annual loss from natural causes about 5 per cent., wolves about 1 per cent.; no loss by dogs or disease. In summer my sheep range the fields as they choose, lying in the barn lot of about 2 acres, where there are trees, during heat of the day; have a good shed, open to south, in same lot, where they go at will; stack hay in the lot, to which they have free access; feed about a gill of corn per head, night and morning; have plenty of water when they desire it. My first venture in sheep figures out thus: Bought 25 head to start with, for $73; at the end of 8 months had 17 head and $39. Only drawback to success is bad management. My experience is, that sheep are most profitable stock that can be handled.

James Martin, Gardner.—Started in the sheep business here September, 1878; had previous experience in Ohio. Have 300 head; ewes from Missouri, rams from Illinois. For wool alone, Spanish Merino is best; for both wool and mutton, a cross of Merino ewes with Cotswold rams. Increase in my flock is 75 per cent. Average weight of fleece, 6 lbs. Sell mutton in home markets for $2.50 to $3 per head. Sold wool in 1879 for 18 cents. Most profitable wool is from Spanish Merinos crossed on coarse wools. Pays to keep wethers for wool till 3 years old; ewes may be kept while their teeth are good—say to 6 or 7 years. I lose about 8 per cent. annually by natural causes; very few by wolves. My flock is kept on prairie pasture in summer; corraled at night. In winter I feed shock corn, and keep racks filled with hay or corn. Have open sheds to which they have free access, but never confine them in a close house or shed. Wheat straw is excellent for them. Think that where one has suitable fences, and gives ordinary care and attention, sheep will pay better than any other stock.

John C. Ferguson.—Began raising sheep here 4 years ago. Have now 27 head; original stock came from Missouri and Illinois. Cotswolds and Southdowns are best for both wool and mutton. My flock increases about 60 per cent. a year. Fleeces will average 8 lbs. Sold wool in 1879 for 22 cents. Long wool most profitable. Lose about 5 per cent. of my sheep annually from natural causes; no other losses. Keep them in woods pasture; corraled at night. Have two ricks of millet to run to, and good board sheds to run under. Have one Cashmere goat with my flock; don't know any advantage in it. I only raise sheep because I like to see them about and for food, as I think mutton the most wholesome meat one can eat. Want of regular and proper care is the only drawback to successful sheep raising.

KEARNEY COUNTY.

A. B. Boylan, Lakin.—Have been in the sheep business in Kansas 3 years. My flock now numbers 500; 1,000 may be successfully kept in one flock. Original stock of ewes came from New Mexico, rams from Kansas; rams from the East do not do well here first season; Missouri ewes must be acclimated. Colorado half-bred ewes bred to pure Merino bucks are most profitable for both wool and mutton. Annual increase in my flock, 70 per cent.; Mexican sheep are most prolific. Fleeces from my sheep average 4¼ lbs. Kansas City is our market for mutton. Ewes are worth $2; wethers, $1.75 to $2. Sold clip of 1879 at 25½ cents. Sheep can be kept with profit till 4 years old. My

losses from natural causes, about 5 per cent. per annum; have lost no sheep by disease or dogs; wolves have killed 15 head in three years. During summer my sheep range the prairie, and are corraled at night; in winter, are on the prairie except during storms, when they are kept under sheds; if the storm lasts more than from six to ten hours, they are fed with hay; have never had grain, and at no time have consumed ten pounds of hay per head during winter. Original stock cost $350; have sold wool and mutton to the amount of $530.40, and have on hand 512 sheep worth $2 each, or $1,024. Goats are advantageous to lead sheep; there are eight in my flock, that lead the sheep out in the morning and back at night. I see no drawback to successful sheep culture here; if sheep are sheltered from storms, and not allowed to get chilled, there is no fear of disease.

KINGMAN COUNTY.

H. Stout, Kingman.—Have raised sheep here since September, 1878. Have 425 head Colorado sheep. A cross of Cotswolds and Merinos is most profitable for both wool and mutton. Fleece from my sheep averaged 4 lbs. Mutton is sold at Kingman at 2¾ cents, gross. Ewes are worth $2 to $3; wethers, $2.50. Clip of 1879 brought 15 cents. Medium wool most profitable. Think it better to sell wethers at maturity, say 3 or 4 years, rather than keep for wool; ewes may be kept till 5 or 6. Last season my losses were 12 per cent., caused by scab and want of feed; have lost none from other causes. In summer, my sheep are herded on the range during day, and corraled at night; salted every four days, and have access to water twice each day; in winter, are fed corn fodder, prairie hay, millet and sorghum fodder, and kept in sheds open to south and east. My flock cost as follows:

400 sheep, at $2	$800 00	
5 bucks, at $10	50 00	
Feed	110 00	
Herding and salt	65 00	
Shearing	20 00	
		$1,045 00
Wool sold	$240 00	
Mutton sheep sold	125 00	
420 sheep on hand	840 00	
5 bucks	50 00	
		1,255 00
Net profit		$210 00

Think it a disadvantage to have goats with sheep. Cannot see any drawback to successful sheep raising except distance to market.

T. J. Huey, Kingman.—Began sheep raising here 4 months ago; bought 140 head of native Kansas sheep; think I should prefer a cross of Cotswolds and Merinos for wool. Have had 10 sheep killed by wolves; are herded, and corraled at night; kept on range during summer and fall; feed in winter, corn, millet and prairie hay; keep on range during the day; have good shed, covered with hay. Sheep should be kept dry, but not too warm. Lack of proper care is the only drawback.

LABETTE COUNTY.

E. B. Baldwin, Kingston.—Have been engaged in sheep culture here 2 years; previously in New York and Iowa. Have now 230 head, original stock coming from Missouri. For wool, Merinos are best; for wool and mutton, Missouri ewes crossed with Merino rams. Missouri and Arkansas sheep are most prolific. Increase in my flock has been about 75 per cent. Average weight of fleece from native sheep 4½ lbs., from Merinos and their crosses 7 lbs. Ewes are worth $2 to $2.50, wethers $2.50 to $3. My clip for 1879 brought 21 cents; wool from Merino grades most profitable. Wethers should not be kept till more than 4 years old; ewes may be profitably kept as long as they will breed. My losses from any cause are very small; my sheep are herded during day, and

corraled at night. In spring, I shear as soon as weather will permit, and turn on range as soon as grass is grown enough to afford full feed; have two ranges, and change often; salt once a week, and water daily. In winter, turn into stalk-fields, or give hay and corn fodder twice a day, and one bushel corn to the 100 head; have good sheds for shelter. Have no account of expense, but profits have been perfectly satisfactory. This section is free from diseases common to sheep in Northern and Eastern States; never saw a case of foot-rot here, and scab only in flocks brought from Missouri or Arkansas. Rams, if brought here in spring, become acclimated; but if brought in the fall, are impaired.

LEAVENWORTH COUNTY.

John J. Gaiser, Pleasant Ridge.—Have been engaged in sheep culture here 17 years. Have at present 400; bought them in Missouri; rams from the East have done well here. Merino, Southdown and Scotch grades are best for wool and mutton. Fleeces from my sheep averaged 4 lbs. Mutton sells for 4 cents in Leavenworth and St. Louis. Price of ewes, $2.50; wethers, $3.50. Merino wool most profitable. Wethers may be profitably kept till 3 years old; ewes to 7 or 8. One season ten of my sheep died from scab; in last two years 25 have been killed by dogs and 75 by wolves. In summer keep my sheep in pasture, having two, so they can be changed. In winter, during severe weather, keep them up, having sheds for protection, open to the south; when weather is suitable let them out to feed on blue-grass; feed with clover, timothy and some corn; it costs about 75 cents per head to winter them.

Cost of flock	$300 00
Herding	60 00
Total	$360 00
Wool sold	$225 00
Value of present stock	850 00
Total	$1,075 00
Profit	$715 00

My experience proves that sheep raising is more profitable than investments in any other stock.

R. B. Moore, High Prairie.—Have been raising sheep in Kansas 5 years; was in the business in Virginia. My flock numbers 106; 100 to 150 may be kept in a flock not herded. My stock came from Kentucky. Think a cross of Merinos and Cotswolds best for wool, Cotswolds and Southdowns for both wool and mutton. My flock increases about 75 per cent. annually. Average weight of fleece, 6 lbs. Price of ewes, $2.50; wethers, $3 to $5. Sold wool in 1879 for 22 cents. Think there is but little profit in keeping wethers for wool. Sheep may be kept with profit till from 7 to 9 years old. I lose about 2 per cent. a year from natural causes, from 10 to 12 head by wolves, and none by disease. Give my sheep very little attention except in lambing season; feed hay and corn fodder, with a little corn or oats; have a good shed, and keep them up from December till May. Count the cost as very small; sheep keep a farm clear of weeds that other stock will not eat. Profit on my flock is from 25 to 35 per cent. Wolves are the great drawback to successful sheep husbandry; if they were exterminated, there would be more money in sheep than in any other stock.

C. H. Chapin, Springdale.—Have been engaged in sheep culture 15 years here; previously in New York. Cheap food and shorter winters are advantages in Kansas. Original stock came from New York and Vermont. Full-blooded Merino most profitable for wool and mutton. Heaviest fleece from my sheep was 24 lbs., lightest 5, average 8. Clip of 1879 brought 22 cents. Most profitable wool is full-blood Merino. Pays best to keep wethers till 3 or 4 years; Merino sheep may be kept with profit till 10 or 12. Losses from natural causes, about 1 per cent.; by dogs, 3 per cent. My flock is kept in pasture; corraled at night. Thrive well on prairie. Have salt once a week.

In winter I give timothy, clover, corn fodder, millet or Hungarian; but will not winter on prairie hay without some grain. Must have protection from storms, and also immediately after shearing. Sheep driven long distances, or confined in cars or vessels a few days, require extra care and good feed till they begin to thrive—this is all there is of acclimation. Dogs are the great drawback. Sheep are often brought here with foot-rot; never knew a case where it was engendered in this State. The following is a cure: Suphuric acid, muriatic acid and spirits of myrrh, in equal parts; pare so as to expose affected parts, and apply the mixture.

LINCOLN COUNTY.

W. E. Marsh, Pleasant Valley.—Commenced sheep-raising here 3 years ago. Have 500 sheep. Two thousand to 3,000 can be kept in one flock, with plenty of room. My rams are from Missouri and Illinois; ewes from Wisconsin and Illinois. Merino is most profitable breed for wool; Cotswold or Leicester rams crossed with Merino or Southdown ewes for both wool and mutton. Southdowns are most prolific, and make best mothers. Maximum weight of fleece from my sheep is 15 lbs., minimum 1½, average 6 to 7. Ewes and wethers are worth $3. Sold wool in 1879 for 21 cents. Heavy, fine wool most profitable. Think it better to keep wethers for wool than to sell for mutton; four to five years is as long as profitable to keep sheep. My losses are small, about 2 per cent. by wolves, possibly 5 per cent. from all other causes. My sheep are herded days, and corraled nights; keep them on range whenever weather will permit. As soon as cold, bad weather sets in, give a light feed morning and night; stormy days when shut up give all they will eat; turn in stalk-fields after corn is gathered; feed millet; prairie hay, with corn, oats or rye, will do, but is not so cheap as millet. Rye for grazing is a great help. Have sheds covered with hay, open east and south. Consider wool at 20 cents per lb. as profitable as wheat at 70 cents per bushel. Great drawback is lack of market in which to dispose of our mutton. Those going into the business should always procure the best sheep. No ram is fit for use, where wool is the object, that will shear less than 15 lbs. Never buy sheep not absolutely free from scab. It is better to pay $3 for sheep that are acclimated, than $2 for those just brought from the East. Don't house your sheep too close; keep them dry, but give plenty of air. Keep rams separate from August 1 until December 1. Never build sheds or corrals on low or level ground, if it can be avoided.

John Medcraft, Lincoln.—Have been in sheep business here one year; had 15 years' experience in England. Have 150 now; got them in Michigan; Merino is best breed for any purpose. Ewes are worth $3, wethers $2.75; 3 years is most profitable age to keep sheep. My flock is herded, and corraled at night. Great drawback is want of green feed from time grass dries in fall till it comes in spring. Think root crops (turnips, etc.) should be raised for feed to sheep; they are economical—also increase weight of both wool and carcass.

R. Williams & Son, Pottersburg.—Commenced raising sheep here 6 years ago; previously in the business in Ohio and Iowa. Have now 900; original stock of ewes came from Wisconsin, rams from Illinois. Fine-wool sheep are best for both wool and mutton. Annual increase about 60 per cent. Fleeces from our sheep average 6½ lbs. Price of ewes $2.50, wethers $2.50 to $3. Sold wool in 1879 for 18½ cents; fine wool most profitable. Lose about 5 per cent. a year from natural causes, wolves 3 per cent. Our sheep are herded, corraled at night; have a large corral with shed on north side, used winter and summer; feed about 1 bushel of corn a day to the 100, with prairie hay or millet; turn on the prairie when there is no snow; want of good shelter and plenty of feed are drawbacks. Sheep bought in other States should come here early in spring, so as to get acclimated through summer.

LINN COUNTY.

A. P. Grimes, Pleasanton.—Have raised sheep here 2 years; had some experience in Illinois. Have 225 now. One thousand Merinos can be kept successfully in one flock. My sheep came from Pettis county, Missouri. Merinos are most profitable to raise. Increase in my flock, a little over 80 per cent. Maximum weight of fleece from my sheep 26 lbs., minimum 5, average 8. Price of ewes, $5; wethers, $3. My wool for 1879 brought 20 cents. Medium Merino most profitable wool. Merino sheep may be profitably kept till from 6 to 9 years old. Loss in my flock, about 5 per cent. from natural causes; disease, about 4 per cent.; dogs, 1 per cent.; none by wolves. In summer my sheep are herded on prairie part of the time, and kept in pasture balance, with free access to water at all times; salted twice a week. Good sheds, to which they have access in winter. Feed 1½ bushels corn to 100 head per day, with corn fodder, prairie hay and pasture in stalk-fields; cost of winter feed, from 75 cents to $1 per head. Actual cash profit of my flock last season was $338.50, besides 190 sheep on hand. Greatest drawbacks are, lack of tame grasses for early and late feed, and that intolerable nuisance, *dogs*. Think rams do not do as well the first year as after being acclimated.

Isaac H. Stallcup, Mound City.—Have been engaged in sheep raising here 3 years; had some experience in Ohio. Have 700 at present; from 1,000 to 1,500 may be successfully kept in one flock. Bought my sheep in Kansas and western Missouri. Think thoroughbred Spanish Merino most profitable breed for any purpose. My flock has increased annually about 75 per cent.; coarse-wooled sheep are more prolific than fine wooled. Fleeces from my sheep average 7 lbs. Sell my mutton at home; average price 3 cents. Ewes are worth from $2 to $6; wethers, $2 to $3.50. Sold wool in 1879 for 19½ cents. Fine wool most profitable. Better to sell wethers at maturity, instead of keeping for wool; not profitable to keep ewes after 5 years old. No losses in my flock from disease or dogs; about 2 per cent. from natural causes, same by wolves, and about 5 per cent. from all other causes. My sheep are herded on prairie during summer, and corraled at night. Separate lambs from the flock 1st of September, putting them in pasture and feeding some grain—oats are best. When flock is put up for winter, pick such as are to be fattened for mutton and feed all the shock corn they will eat. Give rest of flock shock corn and all the prairie hay they will eat. Have good sheds for protection from storms. I figure the profit on my sheep last season at $800. Don't think Kansas has more drawbacks to sheep husbandry than other States.

N. G. Rowley, Mound City.—Raised sheep here 5 years; previously in Illinois 7 years; also in Wisconsin. Have about 150 now; original stock were natives; bucks from Missouri and Kentucky. A cross of Cotswolds and Merinos is about as good as any for both wool and mutton. Increase is about 75 per cent. My sheep shear about 6 lbs. Sell mutton at home for 5 and 6 cents. Price of ewes, $2.50 to $3; wethers, $3. Sold my wool in 1879 for 22½ cents. Merino and Cotswold cross gives most profitable wool. Pays to keep wethers for wool till 4 or 5 years old. Have lost no sheep except by dogs and wolves; these are very destructive. My sheep are herded; corraled at night; in summer salt often; give plenty of water; have shade for middle of day. Feed hay, in winter, in racks outside corral, next the fence, so they can put their heads through the corral fence. I can feed this way without going into corral; can clean racks or feed without disturbing flock. Corn fodder is excellent feed, but they should have some grain; should also be sheltered from rains. Believe when sheep are well cared for they will pay 80 to 100 per cent. No one had better engage in sheep raising unless he is willing to give care and attention; it requires much patience, constant watch in lambing time, and careful handling when sheared; but with necessary attention think it the best paying stock.

O. D. Botkin, Mound City.—Was engaged in raising sheep in Ohio; find here good

range and cheap feed, and no liability to foot rot. Have now 1,000 head, all native sheep. Merinos and their crosses are best adapted for all purposes here. Increase is from 75 to 100 per cent. of ewes. Coarse wools are most prolific. My sheep shear 7¼ lbs., average. Sold my wool in 1879 for 20 cents. Merino and crosses give most profitable wool. Does not pay to keep wethers after maturity for wool. Losses are about 2 per cent. annually from natural causes; dogs, 4 per cent.; wolves, 10 per cent. Herd during summer; corraling at night. Put on range as soon as grass is good; when grass begins to fail, either turn in corn-field or feed shock corn—feed light at first. Sheep should have good shelter from storms, but close housing is injurious. In April, 1879, my flock numbered 1,300, which with feed, etc., made an investment of $5,200; sold since $4,000 worth of wool and sheep, and have now 900 breeding ewes worth $4,500. Loss by wolves and dogs is the worst drawback. Sheep brought from other States seem to do well, except when driven long distances; then they should have time to recuperate. Think it best to buy of responsible breeders near home.

LYON COUNTY.

R. T. Snediker & Bro., Hartford.—Have been engaged in sheep business here 3 years. Flock now numbers 1,500; rams from Vermont, Pennsylvania and Michigan; ewes from Pennsylvania and Wisconsin. Merino is most profitable for all purposes. Our flock has increased from 230 ewes in 1876 to 900 now. Southdowns are most prolific. Heaviest fleece sheared this season was 24 lbs. 12 oz., lightest 5 lbs. 2 oz., average 8 lbs. 5 oz. Ewes are worth from $4 to $10; wethers, from $3 to $5. Sold clip of 1879 for 20 cents. High-grade Merino most profitable wool. Wethers may be profitably kept till 4 or 5 years old; good ewes till they die of old age. Our losses from natural causes about 2 per cent.; disease, none; lost 2 sheep in three years by dogs, and 7 by wolves. Give our sheep their freedom in summer, only watching to keep from straying too far, and to guard against dogs and wolves; salt three times a week, and water every day, summer and winter; shade is as necessary in hot weather as shelter is in winter. Put about 300 in a lot in winter and feed everything they will eat, change in food being very beneficial. Cost of winter feed per head was 60 cents; care in summer, 15 cents. Sheep must be kept dry and sheltered from storms in winter. Want of blue-grass is the great drawback; wolves and dogs are also a great hindrance. The whole gist of the business is, *use common sense;* buy good, sound, heavy-shearing sheep; feed, shelter and water well; never lie down at night till your sheep are as comfortable as yourself, and your reward will be one hundred fold a year.

George Plumb, Badger Creek.—Have raised sheep for 18 years here; was never in the business elsewhere. Have 1,800 sheep now; ewes from Missouri, rams from Vermont. Rams brought from the East are of very little use the first year. Merinos and their crosses are most profitable for wool; for mutton, Southdowns; both wool and mutton, Merino ewes crossed with Southdown rams. My flock has increased about 85 per cent. each year. Native or common ewes are most prolific. Fleeces from my sheep average 7⅗ lbs. Mutton brings 3 cents, net. Ewes are worth $2.50 to $4; wethers, $2 to $3. Clip of 1879 brought 22 cents. Merino wethers may be kept with profit until 6 years old. Cotswolds better be fattened at 3 or 4. I lose about 2 per cent. per annum from natural causes; dogs and wolves, 1 per cent. each. My flock is herded, and corraled nights. In spring, ewes and lambs are kept by themselves till after shearing, when the whole flock is herded together till about September 1, when lambs are weaned, and, with a few old ewes, are turned on blue-grass pasture. Begin feeding as soon as grass dries up—say about October 15. Feed shock corn, millet and prairie hay.

Wm. Grafenstein, Emporia.—Have been raising sheep here 7 years; had previous experience in Germany and Indiana; have to feed too long now; prairie grass dries up too quickly in fall; when blue-grass comes in this will be a paradise for sheep. Have

1,200 head. Original stock of ewes from Missouri, rams from Canada and Missouri. Merinos crossed with Cotswolds, and *vice versa*, make best sheep for both wool and mutton. Increase in my flock is 70 per cent. Long-wools are most prolific. My sheep shear from 4 to 10 lbs. Market mutton at St. Louis or Kansas City, for 3 cents. Price of ewes, $3; wethers, $2.50. Sold wool in 1879 for 20 cents. Medium wool most profitable. Ewes may be kept with profit until 6 years old; wethers until 3 or 4. Losses are 10 per cent. annually by natural causes; 5 per cent. by dogs; wolves, 3 per cent.; 2 per cent. by all other causes. My flock is herded; corraled at night. Have a large stone barn, well ventilated, for protection from storms. Sow 30 to 50 acres rye for fall and spring pasture. In winter, feed all the prairie hay they will eat, and 1 ear of corn a day to each; give plenty of fresh well-water. Lambs and yearlings are kept separate, and fed shelled corn or oats. Costs about $1 a head per year. Stock brought here from Eastern States should have extra care first season; spring is best time to bring them. Oil meal is splendid feed for sheep in winter, greatly increasing weight of wool and flow of milk.

R. M. Mills, Emporia.—Commenced raising sheep here a year ago; had 20 years' experience in Maine. Own 650 now, bought in Colorado. Cotswolds crossed with Merino bucks give best sheep for both mutton and wool. My flock increases 85 to 90 per cent. annually; Cotswolds are most prolific. Fleeces from my sheep weigh from 3 to 12 lbs. Mutton brings from 3 to 6 cents. Sold wool in 1879 for 20 to 24 cents. Merino wool most profitable to raise for sale; for use, medium is best. Sheep may be profitably kept till 5 or 6 years old. Losses are about 5 per cent. from all causes. In summer, graze morning and evening, keeping in shade during middle of day. In winter, feed plenty of early-cut hay, with a little corn, beans, turnips, cabbages or carrots, daily; salt mixed with a little sulphur occasionally. Let them have free access to sheds in storms and cold weather. Turn on prairie when possible for exercise. Cost of keep is $1 a head per year. Want of experience is a great drawback; destruction by dogs and wolves is a serious impediment to success.

MARION COUNTY.

C. F. Stone, Peabody.—Have raised sheep here 8 years; was engaged in the business in New York. Short winters and drier seasons give this State advantages not found elsewhere. My original flock came from New York. American Merino is most profitable for both wool and mutton, while Southdowns are best for mutton alone. My flock increases from 75 to 80 per cent. per annum. Southdowns are most prolific. Fleeces from my ewes will weigh from 12 to 20 lbs., from the bucks 16 to 27. Ewes are worth $2.50 to $3; wethers $2. Clip of 1879 brought 20 cents. Fine wool is most profitable. But little profit in keeping wethers for wool; good breeding ewes may be profitably kept till from 5 to 8 years old; wethers only from 2 to 3. My sheep are kept in an inclosure, housed from cold storms, and corraled at night. It is a good plan to sow rye among corn for late fall and early spring pasture. My advice is, that whatever kind of sheep is decided on should be kept pure. *What would be thought of crossing Jerseys on Durham cows for beef, or Short-horns on Jerseys for milk and butter?* Sheep must have good shelter from storms. No disease among sheep in this county, and losses from this cause are very small. Dogs have caused me a loss of 20 per cent.; wolves, about 2 per cent.

C. E. Westbrook, Peabody.—Have kept sheep here 5 years, 21 years in Wisconsin, 2 years in New York; short, mild winters, and cheap feed, are among the advantages here, while lack of tame grasses for fall feed, and ravages of dogs, are disadvantages. Have now 1,300 sheep; most of original stock came from Vermont. Merinos are best breed to raise. Annual increase of my flock has been about 80 per cent. of number of ewes. Average weight of fleece is 9 lbs. 7 oz. Have sold mutton sheep at home for $3

per head. Wool clip of 1879 brought 20 cents. Fine wool most profitable. More profit in keeping wethers for wool than selling for mutton. Fine sheep may be profitably kept till 10 years old. Losses from natural causes, about 2 per cent. per annum; none by disease; dogs have killed 10 or 12 per cent. this year; wolves have taken a few young lambs. My sheep are herded till after harvest, when lambs are weaned and put on pasture. Give straw and hay in winter, and about a bushel of corn a day to the 100 head. Have open sheds for them to go under in winter. The 1,000 head I started with were worth $2,500; have sold as much as $3,500 worth of wool and mutton, and have on hand a flock worth $5,500. Have had goats for years, but know of no advantage. Dogs are the great drawback to successful sheep culture.

William Culbeck, Peabody.—Have been for 4 years raising sheep here; had experience in Ohio and Iowa. My flock consists of 400 head, brought from Iowa. Most profitable wool is from a cross of Cotswold on Merino; for mutton, Cotswold crossed on Southdown; for both wool and mutton, Cotswold is preferable. Annual increase in my flock has been 110 per cent. of the number of ewes. Cotswold grades are most prolific. Fleeces from my flock average 7 lbs. Mutton is sold at home; ewes, $4 to $5; wethers, $3. Combing or delaine wool most profitable. More profit in selling wethers at maturity than keeping for wool. Sheep may be kept profitably till 4 or 5 years old. My losses annually from natural causes are about 3 per cent.; none by disease; $10 will cover loss by exposure after shearing for the whole 4 years; same amount will cover the loss by dogs during same time; wolves have destroyed about $30 worth in that time. My sheep are herded in summer; corraled at night; watered every day, and twice during the longest days. In winter, well protected by suitable sheds. For 400 sheep my expenses for the year for herding, salt, grain, fodder and shearing, amount to $362; receipts for wool and increase of flock were $1,200; leaving a net profit of $838. A trial of goats convinces me there is no advantage in having them with sheep. No drawbacks to successful sheep culture except want of tame grass for fall feed. Parties who contemplate bringing sheep here should drive them instead of shipping.

J. L. Grinnell, Peabody.—Have raised sheep here 4 years; was never in the business elsewhere. Have 500 now; ewes from Iowa, bucks from Missouri. They do better second year than first. For wool, a cross of Merino and Cotswold is most profitable; for mutton, Southdown, or cross of Southdown and Cotswold; and this last is also preferable for both wool and mutton. Increase in my flock, was 108 lambs from 100 ewes. Cotswolds are most prolific. Average weight of fleece from my sheep, 6¼ lbs. Only local market for mutton; price, $3 per head. Delaine or combing-wool most profitable. Pays to keep wethers until 4 years old for wool, rather than to sell younger for mutton; good breeding ewes should be kept until exhausted. Losses from natural causes, about 3 per cent. per annum; none by disease or wolves; dogs killed this year about 1½ per cent. My flock is herded by day and corraled at night during summer; in winter, kept in yards with good sheds; on fair days, allowed to range in stalk-fields.

Original cost of flock	$750
Original cost of bucks	200
Lost by dogs	220
Lost by other causes	300
Total	$1,470
Value of wool sold	$1,340
Value of mutton sold	273
Present value of flock	1,600
Total	$3,213

Drawbacks are, want of tame grass for fall pasture, and dogs.

S. R. Hunt, Risley.—Raised sheep here 2 years; was in the business some years in New York. Have now 250 head, bought in Missouri and Wisconsin; all did well first

season. Cotswolds crossed with Merino bucks are best for wool; Cotswolds or Southdowns for mutton; cross of Leicester or Cotswold with Merino for both. Increase is about 50 per cent. Fleeces average 6 lbs. Sell mutton at Peabody for 3 to 5 cents, gross. Ewes are worth $2 to $3; wethers $3 to $5. Sold wool in 1879 for 22 cents. Fine wool most profitable. Don't think it pays to keep wethers after 3 years old. Lose about 5 head in 100 annually from natural causes, and 1 head by dogs. My sheep are herded; corraled at night. Give them plenty of salt and water, and good range on high ground; keep in shade in middle of day. In winter, house and feed half-pint of corn a day till grass gets plenty. Realized 33 per cent. net profit last year. Want of tame grasses is a drawback.

William Ewert, Marion Center.—Began raising sheep here 5 years ago. Have 500 head, bought in Missouri. For wool, Merinos are best; for mutton, Southdowns; for both, cross of Merinos with Southdowns. My flock increases about 200 annually; Southdowns are most prolific. Heaviest fleece from my sheep weighed 10 lbs., lightest 2½, average 4⅓. Sell mutton at home for 2¼ cents. My wool in 1879 brought 22 cents. Fine wool most profitable. Can keep sheep with profit till 5 years old. Lose about 2 per cent. by disease; half of 1 per cent. by dogs. Herd on prairie in summer, corraling at night. Feed on prairie hay in winter, with corn in bad weather; sheds for protection. Cost of flock, $1,300; subsequent expenses, $2,000; receipts, $2,300; value of stock on hand, $1,300. Profit, $300. Insufficient care is the great drawback.

MARSHALL COUNTY.

R. C. Garvin, Frankfort.—Have been engaged in sheep husbandry here 6 years; had no experience elsewhere. Have 300 now; stock came originally New York. Think Cotswold and Merino crosses best for wool; never raised sheep for mutton. Annual increase of my flock has been about 66 per cent. Average weight of fleece, 6 lbs. Price of ewes, $3; wethers, $2. Clip of 1879 sold for 22 cents. Most profitable grade of wool, Cotswold and Merino cross. Better to sell wethers for mutton at 3 years old; ewes may be kept till 7. My annual losses from all causes will not exceed 3 per cent. Flock are herded through summer; as soon as grass dies in fall, are fed shelled corn, gradually increasing quantity till they get a bushel a day for each 100. Rent my sheep to a farmer, who gives me half the wool and half the increase, keeping the original number good out of the increase before dividing.

Sheep cost, 6 years ago	$325 00
Lost by mismanagement, 100 head	200 00
Total	$525 00
Sold of my half of increase	$600 00
Sold of my half of wool	500 00
My half flock on hand	300 00
Total	$1,400 00

Greatest drawbacks to success are insufficient food and shelter.

T. P. Creaser, Frankfort.—Have been raising sheep here 9 years; previously in Canada. Have no sheep now; stock I had came from Missouri, except 3 Leicester ewes brought from Canada, where they were bred to a Cotswold buck. Spanish Merino is best breed for wool; for both wool and mutton, a cross of Leicester and Cotswold. My flock doubled every year. Leicesters are most prolific. Fleeces from my sheep averaged 6 lbs. Price of ewes, $3.50; wethers, $4. Wethers should be sold for mutton at from 2 to 4 years old; ewes may be kept till 7. Losses in my flock were about 3 per cent. annually; dogs killed about 4 each year; wolves also killed a few. My flock was herded in summer; corraled at night. In winter, give all straw and prairie hay they want; one pint of oats and corn ground together; think millet is best feed for sheep, it improves the wool. For protection against weather, dogs and wolves, keep them in corral

with covered sheds. Salt once a week, and feed roots twice a week. My account with sheep is as follows: In 1870, brought here 3 ewes; with their wool bought 7 head, doing same for three successive years; in the fifth year, sold wool to the amount of $337.35, and 281 head of sheep for $3.25 per head, making $913.25.

J. S. Crawford, Blue Rapids.—Have been raising sheep here 8 years; never was in the business elsewhere. Have 300 now; ewes from Missouri; bucks from Canada. Best cross for wool and mutton, Cotswold and Merino; best mutton sheep, Cotswolds. My flock increases annually 50 per cent. Cotswolds are most prolific. Heaviest fleece from my flock was 14 lbs., lightest 4, average 7½. Mutton sheep sell in all the country towns at 2½ cents, live weight. Ewes are worth $3; wethers $4. Clip of 1879 sold for 23 cents, unwashed. Most profitable grade of wool, cross of Merinos and Cotswold. Pays better to keep wethers for wool than to sell at maturity for mutton. Sheep cannot be kept with profit after 6 years old. Losses from natural causes are about 2 per cent. per annum. My flock is herded in summer; corraled at night. About Nov. 1, begin feeding corn, giving half a pint a day. My opinion is, if a man starts with 300 or 400 sheep, and confines himself to them alone, he will in a few years become rich.

M. Patterson, Blue Rapids.—Three years ago went into the sheep business, without previous experience. Have 345 now; original stock came from Missouri; had a buck from Illinois that needed no acclimation. Merino grades, one-half to three-quarters-blood, are best for wool; for wool and mutton, Merinos crossed on any large-bodied sheep. Annual increase, 90 per cent. of ewes. My sheep shear from 3 to 7 lbs. Price of ewes, $3 to $4; wethers, $2 to $3. Sold wool in 1879 for 22½ cents. Wool from high-grade Merinos most profitable. Wethers can be kept with profit until 3 years old, ewes until 4. Lose about 5 per cent. annually from natural causes; occasionally a ewe from old age, or lamb-scouring. Herd on prairie about 6 months; about first frost begin feeding corn lightly, increasing until in winter feed 1 bushel a day to 100, with millet and hay once a day. Have ample shelter, where they are kept dry. Cannot give exact cost, but a flock of 500 two and three-year old ewes properly cared for will pay $500 over all expenses each year. Had one goat with my sheep; was glad when he died. Want of tame grasses for winter pasture is the great drawback. The man who can put his sheep in small flocks and pasture on tame grass, with good water, dry sheds open to the south, and small rations of corn, will make most profit.

M'PHERSON COUNTY.

Robert Minns, Sharp's Creek.—Have been in sheep husbandry here 4 years; had no previous experience. Flock consists of 650; brought from Canada. Leicesters are best for any purpose. Yearly increase has been about 300. The bucks shear from 15 to 18 lbs., ewes 12, lambs 10. Ewes are worth $10; wethers, $4.50. Clip of 1879 sold for 20 cents. Wool from Leicesters most profitable. Sheep cannot be profitably kept after 5 years old. Mine are herded in summer, and have good sheds in winter; are corraled at night in summer; are fed in winter about 2 ears of corn and a pint of oats, and all the millet they will eat every day. Lack of tame grass and fences are the great drawbacks to successful sheep culture.

J. M. Wilson, Sharp's Creek.—Four years' experience in sheep culture here; previously in the business in Illinois. Have 600 head, brought from Iowa. Health of sheep coming from other States is not impaired, if properly handled. Most profitable sheep, a cross of long and fine wools. My sheep shear 6½ lbs. Mutton sells for 3 cents in home market. Sold wool in 1879 for 20 cents. Medium or combing-wool most profitable. Wethers should be sold at maturity, instead of keeping for wool. Lose about 1 per cent. annually by dogs; 3 per cent. from all other causes. Herd on prairie in summer; in winter on prairie and in stalk-fields, feeding hay at night; shed them in storms. Cost

of my flock a year for attendance and feed, about $600; sold wool, $780; 225 lambs, increase, at $1.75 each, $393.75; total receipts, $1,173.75.

John Richey, McPherson.—Have been in the sheep business several years here; have none at present. Had some experience in Iowa and Ohio. For a small flock, Cotswolds are most profitable; in large numbers, Merinos. Good shelter should be provided, with corrals adjoining; racks for feeding. Should manage if possible to have range burned off at different times, so as always to have fresh, sweet grass through summer and fall. Pays to feed well in winter. Give all the bright, early-cut hay they will eat; can't give too much corn after the first week or two. Millet is excellent. Know of no drawbacks, provided good sound sheep are procured, kept on good range in summer, and well housed, watered, salted, and fed in winter. During the time I kept sheep, lost none by disease. Think if sheep are well taken care of, there is more profit than in any other stock. It is better to have 300 sheep that shear 10 lbs., than 1,000 that average 3 or 5 lbs.

MIAMI COUNTY.

George Rookstool, Fontana.—Have been raising sheep here 10 years; previously in northern Indiana. Greatest advantages here are cheap feed, and short and mild winters. Have in my flock 154; original stock were Kansas and Missouri ewes—one buck from Ohio. Cotswold and Merino crossed are as good as any for wool and all other purposes. Annual increase of my flock, 1 lamb to each ewe; Leicesters are as prolific as any. Average weight of fleece from my flocks, 6 lbs. Sell mutton at Paola for 3 cents, gross. Ewes are worth $3; wethers, $4. Clip of 1879 sold for 20 cents. Long fine, or combing-wool, most profitable. My annual loss from natural causes about 2 per cent. Dogs give some trouble, but wolves are worst. My flock is herded part of the time, balance of time kept in pasture; kept in sheds at night; during winter, fed in the pasture, and sheds are so arranged they can get in at any time; pasture supplied with water; shed covered with hay, open to the south. Have cattle, hogs and sheep, and find more profit in sheep than any other stock.

P. Crawford, Paola.—Have raised sheep here 6 years; previously in Ohio. Have now 116; original stock from Missouri; had 1 buck from Kentucky, 1 from Canada; they both did as well at first as afterwards. For wool, Spanish Merino is best; for mutton, Cotswolds; for both wool and mutton, Cotswold and Merino. Annual increase in my flock, 30 or 40 lambs. Cotswolds are most prolific. Fleeces from my sheep average 6 to 7 lbs. Ewes are worth $5, wethers $6. Sold my wool in 1879 for 25 cents. Most profitable wool, from a cross of Merino and Cotswold. Annual losses in my flock, about 1 per cent. from natural causes; dogs or disease, none; wolves are very destructive of young lambs; and once in a while one is stolen for mutton. My sheep are kept in an inclosure, and lie in a yard at night; have very little care; sometimes feed corn fodder and prairie hay, sometimes clover or timothy; often do not feed them at all. Last season my sheep cost nothing for keeping in summer, and I raised 30 lambs worth $3 each; 760 lbs. wool, at 25 cents; and sold 22 wethers, at $6 a head.

C. W. Green, Fontana.—Have raised sheep here 4 years; had some experience in Ohio and Illinois. Sheep are more healthy here, and cost of keeping is much less, than in either of those States. Have 135 now, mostly natives bought here. Cotswold and Merino are most profitable for wool and mutton. Annual increase in my flock, about 50 per cent. Fleeces average about 5 lbs. Only sell mutton to home butchers, getting 2½ cents, gross. Ewes are worth $1.75; wethers, $2.25. Sold wool in 1879 for 20 cents. Medium most profitable grade of wool. Think it better to keep wethers till 5 or 6 years old, rather than sell for mutton at maturity; ewes may be kept with profit till 8 years old. My losses from natural causes, about 4 to 5 per cent. per annum; a few head by sickness, but had no special disease; 2 killed by dogs; none by wolves during last two years; 2

were gored by cattle. In summer they run at large in day-time; yarded at night. In winter, are fed corn fodder and prairie hay, with 1 bushel of corn per day for 125 head; are protected by sheds. Cost for winter feed, about 75 cents a head. Cost of my flock as follows:

Paid for 47 sheep	$70 00	
1 buck	4 00	
Cost of keeping	150 00	
		$224 00
Wool sold	$190 00	
25 sheep sold	65 00	
135 head on hand	225 00	
		470 00
Amount for my work		$246 00

Have had best success with lambs dropped after April 1, when there is grass for the ewes instead of dry feed.

A. J. Hill, Paola.—Began to raise sheep here 4 years ago, without previous experience. Have now 90 head; original stock of ewes were natives, rams from Canada. Most profitable sheep for wool, Vermont Merino; for wool and mutton, Southdown. Increase in my flock, 100 per cent. per annum. Heaviest fleece weighed 13 lbs., lightest 5, average 8. Mutton brings 3½ cents in home market. Price of ewes, $2.50; wethers, $4.50. Sold clip of 1879 for 25 cents. Coarse wool most profitable. Wethers should be sold at maturity. Losses by natural causes, about 1 per cent.; occasionally one by over-feeding. Keep my sheep in pasture; plenty of good water; salt regularly. In winter, feed grain and all the hay they will eat. Only drawback, want of proper attention.

MITCHELL COUNTY.

A. O. Foote, Asherville.—Have been in the business here 6 years; had previous experience in Wisconsin; more range here, and larger flocks can be kept; winters are milder. My flock numbers 185. Three or four thousand may be kept successfully in one flock. My original stock came from Wisconsin. Think Merinos best for all purposes, though Missouri ewes crossed with Merino are good. My average increase has been 55 per cent. Heaviest fleece was 18½ lbs., lightest 4, average 7 lbs. 2 oz. For mutton, price is $2.50 to $3 per head at home. Ewes are worth $4; wethers, $2.50 to $3. My wool for 1879 brought 20½ cents. Sheep may be profitably kept till 7 or 9 nine years old. Losses in my flock from natural causes less than 20 per cent.; no loss from disease, exposure after shearing, or wolves; only 1 killed by dogs in 6 years. They are herded in summer; corraled at night. In winter, put in stalk-fields part of the time; fed grain from October 20 to May 1, commencing light and increasing to one ear a day for each head, with good prairie hay morning and night, and wheat straw at noon; plenty of water, and salt once a week. My sheep bring me a net profit of over $200 a year, besides those on hand worth $625. Rye sown early makes excellent feed for lambs to run on, and the grain is better than corn for spring lambs during winter, but is not good for breeding-ewes.

R. W. Knox, Cawker City.—Have been in the business here 3 years; formerly in Wisconsin. Dry climate, good native grasses, extensive range and entire freedom from disease, are advantages of Kansas. Have now 1,200 head, bought in Russell county, Kas.; original stock from Colorado; rams were bred in Vermont. Think a ram does better after acclimation, but with good care will do well first season. Mexican or Colorado ewes crossed with thoroughbred Merino rams make excellent sheep for wool and mutton, while the same crossed with Cotswold make best mutton. Annual increase of my flock, 85 per cent. of ewes. Cotswolds are most prolific. Chicago is our market, and first-class mutton brings from 5 to 7 cents, gross. Ewes and wethers are worth $2 to $3 per head. Sold my wool in 1879 for 23 cents. Merino grade most profitable wool.

Wethers should be kept until 3 years old; ewes, with profit, to 5 or 7. My losses are about 2 per cent. annually by natural causes; none from disease; dogs and wolves kill about 1 per cent. My sheep are herded by day, corraled at night. Think it best to have lambs come in May, as grass is generally good by that time. After lambing, say by June 10, shear and dip, to destroy insects and prevent scab. Change range at least twice during summer. Consider good shelter as essential as feed. Cost of wintering is 45 cents per head. My first year's profits on sheep were 40 per cent. on an investment of $1,000. Dogs, wolves, scab, and worst of all, *negligence*, are drawbacks to success. During fourteen years' residence in Kansas, I have observed that the men who have been engaged in sheep raising here, as in New York and Vermont, are the ones who get rich. Sheep husbandry is more lucrative than any other branch of agriculture, and wool at 20 cents per lb. is equal to wheat at $1.10 per bushel.

John M. Vernon, Asherville.—Have been raising sheep here since 1873; previously in Pennsylvania. Dry winters, abundant pasture, and healthy climate, are advantages not found in Pennsylvania. Have 794 at present; bought bucks in Pennsylvania, Missouri and Wisconsin; some of my ewes came from Wisconsin, some from eastern Kansas. Common ewes crossed with heavy Merino bucks give most profitable grade of wool; are also best cross for any purpose. Annual increase of my flock, 85 per cent. Average weight of fleece, 8 lbs. Average price of mutton, $3.10 per 100 lbs., gross. Price of ewes, $4; wethers, $2.50. Sold my wool in 1879 for 21½ cents. Medium-grade wool most profitable. Good shearing-wethers should be kept for wool till 3 or 4 years old; good breeding ewes should never be sold. My losses from natural causes are from 1 to 4 per cent. annually; only disease causing loss was milk fever, which has killed 3 or 4 in six years; none by dogs or wolves; principal loss caused by changing from dry to green feed, and from green to dry. In summer my sheep are herded in flocks of about 800, giving them ample range and plenty of good running water; corraled at night. As soon as wheat is cut, turn on the stubble; when grass begins to fail, turn into stalk-fields; by 15th of November give all the corn they want; depend largely on corn fodder till Christmas. Have good tight sheds for winter protection. When feeding corn, give free access to water and hay, and plenty of exercise. My accounts for the time I have been in business, show a net profit of $5,299.35.

M. S. Chapel, Asherville.—Have raised sheep here 2 years; some previous experience in Ohio. Have in my flock 200; 3,000 may be successfully kept in one flock. My sheep came from northern Ohio; rams from there were as good first year as since. For wool, should prefer to cross Cotswold bucks on medium or fine-wooled ewes; this would also make most profitable cross for wool and mutton. Increase in my flock is 100 per cent. per annum. Cotswolds are most prolific. Heaviest fleece from my sheep weighed 22 lbs., lightest 6½, average 12½. Price of ewes and wethers, $2.50. My wool for 1879 brought 23 cents. Combing-wool most profitable. Losses in my flock from natural causes are about 2 per cent. per annum; none by disease, dogs or wolves. My sheep are herded during summer; corraled at night. In winter they have plenty of hay and straw; feed about a bushel of corn to each 100 head per day; towards spring feed turnips, especially in lambing time. There are no drawbacks here except lack of tame pasture, which will be overcome in time.

J. B. Gleason, Asherville.—Have been engaged in sheep culture here 6 years; had some experience in Wisconsin. Have 168 sheep now; original stock from Wisconsin. Merinos are best sheep for any purpose. Fleeces average 6 lbs. Sell mutton at home for 2½ cents. Price of ewes, $4; wethers, $2.50. Clip of 1879 brought 20½ cents. Profitable to keep sheep till 6 years old. Losses very small from any cause; only 2 head by dogs, 3 by wolves, in 6 years. In summer, herd on prairie with some other flock. In winter, keep in corral, feeding hay and corn; about a bushel a day for the 168; have a

shed covered with hay, with stone wall on north side. Don't think sheep will do well on buffalo grass alone. Should be let out daily for exercise. Sheep require attention and care, and then will yield a profit.

MONTGOMERY COUNTY.

J. Q. Waggener, Independence.—Have been in sheep business here 7 years; had some experience in Michigan. Have 75 head now; native stock of ewes, rams from Canada. Leicester, Cotswolds and Southdowns are the best breeds. Have raised 150 lambs from 100 ewes. My sheep shear from 3 to 12 lbs. Sold my wool in 1879 for 19 cents. Have lost no sheep from any disease; some have died from old age; a very few killed by dogs. Keep my sheep in pasture, with sheds for shade and plenty of good well-water; salt twice a week. For winter, have ample sheds, kept as clean as my horse barn, with feed racks under them, so the sheep are always under cover at night; have large timothy pasture; feed turnips, oats, a little corn, millet, prairie hay, timothy, and weeds cut and put up as hay, which they seem to relish best. Cannot give exact account, but make my sheep net me $4 or $5 a head each year. Have tried goats with sheep; don't think they are any benefit. Perhaps a "billy goat" that would fight off dogs might prevent loss. Want of proper management is the only drawback. I believe that 1,000 native ewes with a few good Leicester or Cotswold rams properly taken care of will clear $3,000 a year. Can winter sheep here for 25 cts. a head.

MORRIS COUNTY.

C. L. Knight, Council Grove.—Commenced sheep business here 4 years ago; had previous experience in New Hampshire. Mild climate, cheap lands and unlimited grazing-grounds, are advantages in Kansas. My flock number 1,000; procured original stock in Michigan. Sheep must be acclimated. Most profitable breed for both wool and mutton is American Merino. My average annual increase is 85 per cent. Heaviest fleece weighed 13 lbs., lightest 4, average 8. Sold my wool in 1879 for 24 cents, net, in Boston. Medium wool most profitable. Most profit in keeping wethers for wool till 6 years old. Lose 4 or 5 per cent. from natural causes; no other losses. My sheep are herded in summer; corraled at night. In winter, feed corn, oats, millet and hay. Have good sheds. Make a good profit on my sheep. Want of proper care is the only drawback.

Lewis Webster, Dunlap.—Have been engaged in sheep culture here 4 years; never elsewhere. Have now 1,000 at home, and 1,000 ewes out on shares; secured my original stock in central Missouri. Most profitable cross for any purpose is Southdown and Cotswold ewes with best Merino bucks. Average annual increase, about 100 per cent. Cotswolds are most prolific. Average weight of fleece, 6 lbs. Sold clip of 1879 for 23 cents. Medium and combing-wools most profitable. Wethers may be profitably kept till 4 years old, ewes as long as they will breed. My loss from natural causes does not exceed 1 or 2 per cent.; none by dogs or wolves. My sheep are herded in summer; have plenty of water, good range, ample supply of salt with sulphur mixed in it, and clean yard for nights. In winter, have good shelter, with plenty of water, salt, good early-cut hay, wheat straw, clover, millet, corn and corn fodder. Feed should be changed as often as possible, and sheep given plenty of exercise. With careful attention, good feed, good shelter, and guard against scab, sheep culture is the most profitable business that can be engaged in in Kansas.

H. S. Day, Parkerville.—Have been raising sheep here 3 years, never elsewhere. Have 38 now; bought them in this county. Cotswold crossed with Merino is best for any purpose. My flock has increased 100 per cent. per annum. Heaviest fleece was 10½ lbs., lightest 4½. Mutton sells for 2½ cents, gross, in home markets. My wool for 1879 brought 21 cents. Medium wool most profitable. Losses from natural causes, not

more than 2 per cent.; none by dogs or wolves. My flock is herded in summer; as soon as grain is stacked, are turned on the stubble. In winter, are kept in a corral, with a good tight barn for shelter; feed 1½ bushels of corn to each, with hay and straw. Let them run in corn-fields during good days in winter. I think the advantage of having sheep on the farm to destroy weeds and manure the land will more than pay for their feed.

Peter G. Doward, White City.—Commenced handling sheep here in October, 1879. Have 204 head now, most of them native stock; ram from Illinois. Ewes are worth $3 to $4; wethers, $2 to $3. Loss by dogs and wolves will be small, as the *shot-gun policy works well!* My sheep are herded; corraled at night; have a pint of corn a day from time grass begins to fail till it comes again; have good, warm sheds for protection in winter. Want of proper shelter and care are the drawbacks to success. Give plenty to eat, drink, and good shelter, and sheep will pay double for all the care and expense.

E. A. Hackett, Parkerville.—Four years in sheep business here; raised sheep in Michigan. More time to pasture here. Own 59 head native sheep. A cross of Merino ewes with Cotswold bucks is best for both wool and mutton. Annual increase in my flock, 90 per cent. Cotswolds are most prolific. Fleeces from my sheep average 8½ pounds. Sell mutton at Parkerville, for 2½ cents. Price of ewes, $2.50; wethers, $3.25. Clip of 1879 brought 23 cents. Profit in keeping wethers until 3 years old. Losses from disease or any cause, very small. Herd in summer as soon as grass starts; have salt where they get it at pleasure; water twice a day. As grass dries in fall, feed a little grain; about November 1st begin to feed hay, and increase the feed of grain. Prefer corn, as it makes more wool. Have a large sheep house for winter shelter; keep it clean and dry.

R. M. Farmer, White City.—Commenced raising sheep here 2½ years ago, with a little previous experience in England. Have now 340 head; original stock of ewes from Missouri, rams from England. Most profitable sheep for wool, are Leicesters or Cotswolds; for mutton, Southdowns or Shropshires; for both, Cotswolds, Southdowns or Shropshires. Increase is 50 per cent. Average weight of fleece, 3 lbs. Sold my wool in 1879 for 26 cents. Prefer to sell wethers rather than keep for wool. Loss was about one-ninth by natural causes and about one-seventh by scab, last season. My sheep are herded by day in summer, kept in movable corrals at night; move corral twice a week. In winter, keep in corral with good warm shed, feeding plenty of hay; prefer oats to corn, the latter making them shed their wool. My sheep so far have not made any profit, on account of scab. Think a healthy flock of ewes more profitable than cattle; they want more care than cattle, but the profit is larger.

NEMAHA COUNTY.

H. B. Shepherd, Oneida.—Eight months ago went into sheep husbandry here; had a small flock once in Ohio. Have 230 head now; Missouri. Think Merino and Cotswold make best cross for wool; Cotswold and Southdown best for both wool and mutton. My sheep shear about 6 lbs. Mutton brings 3 cents in Seneca. Price of ewes, $2.50; wethers, $3. Sold clip of 1879 for 21 cents. Medium wool most profitable. Sheep cannot be profitably kept after 5 or 6 years old. Only losses have been 10 head killed by dogs. My flock is herded in summer; salted once a week. October 15, feed a little corn daily, and about November 1, feed millet, corn and hay, each once a day. Once in two weeks give a little sulphur to keep wool from shedding. Had a shed covered with hay and sorghum crushings, but the sheep ate the covering. Dogs and wolves are drawbacks. Think there should be an association to meet and talk up sheep interests.

Peter Van Patten, Centralia.—Have handled sheep here 9 years. Had previous experience in New York. Have 250 now, all bought in this State. Most profitable cross for wool is between Cotswolds and Merinos; for mutton, Cotswold and Southdown; while

for both wool and mutton, Cotswolds are best. This year 152 ewes raised 123 lambs. Southdowns are most prolific. Average weight of fleece from my sheep is 5¼ lbs. Seneca and Centralia are the markets for mutton, bringing 8 cents per lb. Price of ewes $3, wethers $4. My wool for 1879 sold for 23 cents. Wool from Cotswolds most profitable. Think it better to sell wethers at 1 year old than to keep for wool. My losses from natural causes are not more than 1 or 2 head out of 200; never lost any by disease; dogs kill about 2 per cent., wolves perhaps one-half of 1 per cent. My sheep run at large during summer; are corraled at night. In winter are protected by a large sheep barn; feed them corn, oats, hay, millet and straw. Have plenty of shade that they have access to in hot weather. Cost is as follows:

Care of flock last season		$335 00
Wool sold	$285 25	
Pelts	36 00	
Mutton	203 00	
Ewe lambs on hand	150 00	
		$674 25

Have besides all but 10 of the original flock, worth $800. Goats are of great advantage with sheep; they keep off dogs and wolves; 2 or 3 with each 100 sheep is enough. Poor shelter, poor feed, dogs and wolves are drawbacks to success here.

Lewis Zahm, Seneca.—Have been raising sheep here 5 years; previously in Ohio. Do not think prairie grass as good as tame-grass pastures in Ohio; corn is much cheaper, and sheep more healthy; have no foot-rot. Dogs and wolves are worse here. Have 50 head in my flock now. Think from 500 to 600 may be kept in one flock successfully. My original stock came from Ohio. Think Cotswolds or Southdowns, or a cross on Merino from either, most profitable for wool and mutton. Increase of my flock is 80 per cent. Average weight of fleece is 8 lbs. Price at home for mutton, 3 to 3½ cents, gross. Ewes are worth $1.50; wethers, $1.75 to $2. Sold my wool in 1879 for 22 cents. Coarse or combing-wool, most profitable. Wethers may be profitably kept till 3 years old, ewes till 6. Losses from natural causes, about 10 per cent.; dogs, 2 per cent.; no loss from other causes. In summer, turn my sheep in pasture, corraling at night. Pasture has water. Begin to feed corn Oct. 1, and increase quantity as weather gets colder, till they get 1½ pints a day; feed some prairie and some tame hay; keep in corral with good shed attached, in bad weather; on pleasant days, turn into pasture. Wean lambs in September, and begin feeding them oats; one-half pint, and increase to 1½ pints, as season advances. The figures are as follows:

On hand Dec. 1, 1878, 24 ewes, at $2	$48 00	
8 lambs, at $1.50	12 00	
6 wethers, at $2	12 00	
4 tons hay	8 00	
125 bushels corn	31 25	
25 bushels oats	6 30	
One-half barrel of salt	1 25	
		$118 00
On hand Dec. 1, 1879, 25 ewes	$50 00	
19 lambs	28 50	
6 wethers	12 00	
Sold 4 wethers	14 00	
Sold 304 lbs. wool	66 88	
		171 38
Showing net profit of		$52 58

Wolves, and cost of herding, are great drawbacks to success in sheep raising here.

NEOSHO COUNTY.

Mrs. Julia A. Butler, Erie.—Have been engaged in sheep raising here 18 months. Have 150 sheep, purchased here; original stock came from Missouri; bought 1 buck in Canada. Sold wool in 1879 for 21½ cents. My flock is herded in day-time; corraled at

night. Last winter fed millet, prairie hay, oat straw, and 1 bushel corn per day to 100 sheep; they had the run of a timber bottom; are sheltered from storms by a hay-covered shed. Don't think there are any drawbacks to success in sheep raising except shiftlessness on part of owners, and exorbitant railroad freights. Success so far has proved that sheep culture is profitable, and I shall stick to it.

William McCully, Chanute.—Have been handling sheep 25 years; was in the business in Missouri. Water is better, grass more plentiful, and winters not so long or cold as in Missouri. Have 25 head common sheep. Sold wool in 1879 for 40 cents, tub washed. More profitable to keep wethers till 5 or 6 years old than to sell younger for mutton. But little profit in sheep after 7 or 8 years old. My losses are about 2 per cent. annually from natural causes; none by disease or dogs; wolves got 2 lambs last season. In summer my sheep run with the cattle, and are protected by them from dogs and wolves. In winter keep them in stalk-fields, rye pasture, or timothy meadow, and at night corral them on high ground where there is a shed for protection, and feed corn, millet, hay, sorghum fodder, or such as I have, changing so as not to confine them to one kind long at a time.

James M. Allen, Urbana.—Have been in the business here 4 years. Have 600 now; ewes from Missouri and Iowa, rams from Missouri. Have crossed grade ewes with Merino rams; think this makes a good cross for both wool and mutton. Annual increase of my flock, about 75 per cent. Average weight of fleece, 7 lbs. Market for mutton, Chanute, where it brings 3 to 4 cents, gross. Sold wool in 1879 for 21 cents. Medium-fine wool most profitable. Wethers should be kept until fully matured, instead of selling young for mutton; ewes are not profitable after 6 or 7 years old. My losses from natural causes, from 1 to 2 per cent.; none by disease, dogs or wolves. Are herded in day-time, kept in large lot at night, where there is a large barn with basement, under which they go at pleasure; have another lot with hay sheds, where I keep some of my wethers and lambs; have all the hay and fodder they will eat, with corn at the rate of a bushel or more to the 100 head each day.

M. S. Johnston, Urbana.—Have been engaged in sheep growing here 4 years. Have now 425. Bought the rams in Missouri; ewes in Linn county, Kas.; they came from Iowa the season previous. Grade Merinos are most profitable for both wool and mutton. Southdowns best for mutton alone. Annual increase of my flock, 80 per cent. Southdowns and Leicesters most prolific. Mutton for St. Louis market brings 4 cents, at Parsons 3 cents, gross. Sold wool in 1879 for 22 cents, unwashed. Wethers may be kept with profit till 4 years old, ewes till 5. Losses in my flock by natural causes, about 3 per cent.; only 4 by dogs, none by wolves. Sheep are herded in summer; corraled at night. Commence feeding about Oct. 10th, and feed till about April 15th. Give corn fodder with corn on stalks once a day and all the prairie hay they will eat till last of February, when they get millet instead of prairie hay. While feeding millet, reduce the corn ration about one-half. Millet increases the flow of milk and weight of fleece, but where fed too much will sometimes cause ewes to lose their lambs. My sheep cost as follows:

First flock, 200 ewes	$400 00	
3 rams	115 00	
68 ewes bought next year	193 80	
Cost of feed, salt, shearing, etc	1,067 60	
		$1,776 40
Sold wool and sheep	$2,299 21	
425 sheep on hand	1,062 50	
		3,361 71
Net profit		$1,485 31

Only drawback to success, distance to market.

D. G. Bonham, Thayer.—Commenced raising sheep here 2 years ago; had some experience in Ohio. Winters are shorter and milder here than in Ohio. The disadvantage

here is lack of blue-grass, which is easily remedied. Have 110 in my flock; ewes from Missouri, buck from the East. Think the best sheep for any purpose is from Missouri ewes, crossed with a fine-wooled buck, then that cross with Cotswold. My ewes averaged this season 1 lamb each; Cotswolds are most prolific; fleeces averaged 5½ lbs. Mutton brings 2½ to 4 cents, gross, in home market. Ewes are worth $2 to $2.50, wethers $2 to $3. Sold wool in 1879 for 21 cents; think it best to sell wethers at maturity, instead of keeping for mutton. Lose about 5 per cent. annually from old age, none by disease, 1 by dogs, (*and 1 dog lost soon after.*) My sheep are allowed their liberty in summer time, corraled at night. In winter are sheltered by hay-covered shed; they run out, except on stormy days. If sheep are properly cared for, they will prove a success.

David Yockey, Thayer.—Commenced to raise sheep here in June, 1878; in the business 10 years in Missouri. Sheep are more healthy, and can graze on the range earlier and later, than in Missouri. Have now 325; Missouri ewes, rams from Wisconsin. Best cross for both wool and mutton is from Merino ewes and Cotswold bucks. Usually raise 1 lamb to each ewe; price of ewes $2, wethers $3. Sold wool in 1879 for 23 cents. Prefer keeping wethers till 6 or 7 years old for wool, rather than to sell younger for mutton. Losses from any cause very light. Herd my sheep in summer; in winter, feed corn fodder and millet; have good sheds. Tried 1 goat, but saw no benefit.

OSAGE COUNTY.

George R. Mann, Olivet.—Have been raising sheep here 8 years. Had 4 years' experience in Missouri, and 20 in New York. Native grasses are more varied and nutritious and climate drier than in Missouri. Have 900 sheep. Two thousand can be kept in one flock in summer, but should be divided into three flocks in winter. My ewes came from Missouri, Iowa and Ohio; rams from Missouri. Most profitable breed for wool is as near to pure Spanish Merinos as can be had; for both wool and mutton, Cotswolds are best. Average annual increase of my flock, about 75 per cent. Southdowns most prolific. Heaviest fleece from my sheep weighed 28¾ lbs., lightest 2½; average, 5½. Markets for mutton, Osage City and Topeka; price, 3 cents, gross. Ewes are worth $4, wethers $3. Sold wool of 1879 in Philadelphia, for 16¾ cents. Fine wool most profitable. Think it advisable to keep wethers until past 4 years old, selling just after shearing; ewes may be profitably kept until from 10 to 16. Losses in my flock by natural causes will not exceed 1 per cent. a year; none by disease or exposure after shearing; loss by dogs has been very small; by wolves, 2 per cent. About April 1, turn my sheep on prairie, corral at night; salt twice a week; shear about 20th of May. July 1, separate rams from the flock, and August 20, wean lambs, putting them and old ewes intended for sale in the fall in a field by themselves. Keep lambs and weak sheep in separate flock all winter, feeding them oats cut green and made into hay mornings, and hay at night. Feed the main flock prairie hay morning and night, and corn at noon, giving one-fifth ton hay and 1 bushel corn to each during winter. Have good sheds covered with hay, open to south. Ignorance and carelessness are the only drawbacks to success. Do not think sheep brought from other States are so hardy as natives, but they are healthy, and only need a little better shelter and care to come out all right.

D. M. Clemmer, Osage City.—Started in sheep raising here 4 years ago; previously in the business in Ohio. Have now 1,640; with plenty of range and water, 3,000 may be kept in 1 flock, but in winter should be divided into flocks of 1,000. Obtained my rams in Missouri, ewes in Saline and Coffey counties, this State; they came originally from Iowa. Think Merinos most profitable for wool; best cross is Merino rams and Southdown ewes; for mutton, Cotswolds are best. Annual increase of my flock about 80 per cent. of the ewes; Southdown and Cotswold are most prolific breeds. Send some mutton to Chicago; price, 3½ cents, gross. Ewes and wethers are worth from $2.50 to $3. Sold wool in 1879 at 21 cents; medium wool most profitable; keeping wethers for wool till 4

years old pays best. Sheep may be profitably kept till 5 years old. My losses from natural causes, exposure after shearing, and disease, about 1 per cent. each; have lost but 1 sheep by dogs, and 1 by wolves, in 4 years. In summer my sheep range on prairie, corraled at night; salt once or twice a week. In winter are kept in lots, with ample protection, under sheds having south opening; fed all the hay and millet they will eat, and also about 1½ bushels corn a day to the 100, on the fodder. Foot-rot and scab the only drawbacks to success. Would advise beginners to start with small flocks, till they get a knowledge of the business and diseases of sheep.

Ira Mead, Burlingame.—Have been handling sheep here 6 months; some previous experience in Wisconsin. Think cheap pasturage, low price of grain and dry climate greatest advantages Kansas has for sheep culture. Have 450 head; some from England, some from Colorado. A cross of Cotswold and Lincolnshire with Merino is most profitable for both wool and mutton; for mutton alone, Cotswolds crossed with Southdowns. My sheep are herded on prairie in summer; corraled at night. In winter turned out on prairie every fine day, for water and exercise. Have ample shedding, with racks for feeding. Feed prairie hay and corn, at a cost of about $1.35 per day for the entire flock. My sheep are part of the flock owned by the late George Grant, of Victoria, Ellis county, and were in very bad condition, owing to the neglect of those in charge since his death. Good care, however, is already improving them greatly.

V. A. Lepper, Burlingame.—This is the second year I have been in the sheep business. Have 550 sheep, brought from Michigan; lost none by process of acclimation. Cross of Cotswolds and Merinos is best for wool and mutton. Increase in my flock last season, about 80 per cent. Fleece from my sheep averaged 7½ lbs. Sold wool in 1879 for 19½ cents. Medium wool most profitable. Losses so far have been only 2 head from natural causes. Herd in summer, corraling at night. In winter, keep breeding-ewes, wethers and lambs in separate flocks. Feed 20 tons of prairie hay to each 100, with 1½ bushels corn per head; give as much variety as possible — millet, oats and roots. Hay sheds. Carelessness of owners only drawback.

OSBORNE COUNTY.

W. F. Cochran, Osborne.—Have been engaged 2 years in raising sheep here; no experience elsewhere. Have 900 head; rams from Missouri; ewes from New Mexico; these ewes crossed with Cotswold bucks, and that cross bred to Merino bucks, will give best breed for wool; for both wool and mutton, should think a cross of Cotswolds and Merinos best. Sold wool in 1879 for 22 cents. Medium grade of wool most profitable. Think sheep may be profitably kept till 7 or 8 years old. Losses from any cause, very small. My sheep are herded during day; corraled at night. Commence feeding corn about December 1, giving 3 or 4 bushels a day, and feed until grass comes; have good sheds; herd them fine days; when stormy or very cold, feed hay and increase corn ration. Think that scab and careless herders are the worst drawbacks. My sheep are dipped in tobacco twice within ten days in July.

B. F. Hilton, Twin Creek.—Have been handling sheep here 1 year; had previously been in the business in Ohio. Have 810 head, native Kansas sheep. Think Merinos most profitable for wool, Cotswolds or Southdowns for mutton; cross between Cotswold and Merino best for both wool and mutton. Increase in my flock about 86 per cent. annually. Ewes are worth $3 to $3.50, wethers $2.50 to $3. My wool in 1879 brought 21 cents. Common grade of wool most profitable. Do not think sheep can be kept with profit after 6 years old. Losses by natural causes very light; in the last year only 1 in 500. Have had no loss by disease, dogs or wolves; lost 3 that got mired. My flock is herded in day-time; corraled at night. When there is no snow on the ground, they are kept on the range. I fed 300 bushels of corn and 15 tons of hay. My sheds are made by putting forks in the ground, with poles along covered with brush, then straw

stacked on top, giving warm and dry shelter. Expense of keeping 500 ewes, which cost $1,500, was $326.50; raised from them 419 lambs, and sold $320 worth of wool—making a profit of 52 per cent. on the capital invested. Want of proper care only drawback to success here.

OTTAWA COUNTY.

J. G. Lancaster, Minneapolis.—Have been engaged in sheep culture here 4 years; have 250 now; ewes from Wisconsin, buck from Ohio; he did good service first season. Merinos are most profitable, both for wool and mutton. Increase in my flock about 75 per cent.; coarse or long-wooled sheep most prolific; Merino ewes seldom have twins. Average weight of fleece from my sheep, from 6½ to 7¼ lbs.; Kansas City our market for mutton; wethers bring about $3 a head. Price of ewes $2.50 to $3, wethers $2 to $3. My wool in 1879 brought 20 cents; Merinos most profitable for wool. Think it better to keep wethers for wool than to sell for mutton. Sheep may be kept with profit till 5 or 8 years old. Losses in my flock from natural causes, about 8 per cent.; no loss from disease, dogs or wolves. My sheep are herded in summer, corraled at night; in winter, run in pleasant weather on stubble-fields and corn-stalks; in bad weather are fed in a corral and stock-yard, with a shed, open south, for shelter from storms. Cost, from 85 cents to $1 a head for herding and feed. Total profit was $262, or 43⅓ per cent. on the investment. Lack of pasture land is greatest drawback here to success.

W. S. Gregory, Minneapolis.—Have been raising sheep 4 years here; previously in Illinois. Have 700 at present, brought from Missouri. Fine Merinos are most profitable for wool, Southdowns best for mutton, and Cotswolds for both wool and mutton. Average annual increase in my flock, 90 per cent. Average weight of fleece, from 6 to 6½ lbs. Price of ewes, $2.50; wethers, $2. My wool for 1879 brought 18½ cents. Fine wool most profitable. Would advise keeping wethers for wool rather than to sell for mutton. Sheep cannot be kept with profit after 6 years old. My losses from natural causes, not over 1 per cent.; only lost one by dogs in 4 years; wolves kill 4 or 5 a year. My sheep are herded on range from about March 20, feeding a little grain till grass is good. About October 20, begin feeding corn, giving one-half bushel a day to 100 head; keep on range till about Christmas; feed hay and straw, with some millet, through winter; have sheds made of poles covered with hay for shelter. Only drawback to success with sheep here, *negligence.*

F. S. True, Churchill.—Have been raising sheep here 4 years. Have 1,325 head original stock from Michigan and Missouri. Grade Merinos are best sheep for both wool and mutton. From 80 to 90 per cent. of my ewes raise lambs. Heaviest fleece weighed 20 lbs., lightest 3, average, 6⅛. Sell mutton in Chicago, getting 2½ to 3 cents, gross. My clip of 1879 brought from 19½ to 22 cents. Grade Merino most profitable wool. Wethers may be kept with profit until 8 years old; ewes until they die of old age. Losses by natural causes, about 1 per cent. a year; in four years have had five or six killed by dogs, ten by wolves, and lost twenty-five by other causes. Herd in summer; corraling at night. Put them on range about April 1. Lambs come in May. Shear 1st to 15th of June. About October 1, begin feeding corn on range, small ration at first, gradually increasing to a bushel a day per 100. If weather is not too inclement leave them on range until middle of December, then put in corral where there are good sheds, open south. Feed lambs threshed oats and corn. Cost of 1,000 ewes for one year, as follows:

1,000 sheep, at $3 per head	$3,000
Interest	300
Corral and sheds	100
Man one year, herding, etc	250
1,500 bushels corn, at 20 cents per bushel	300
75 tons prairie hay, at $2 per ton	150
Shearing	100

Other expenses	$200	
1½ per cent. loss	45	
Tax	45	
Use of bucks	35	
		$4,525
80 per cent. of 1,000 ewes, 800 lambs	$2,000	
6,000 lbs. wool, at 22 cents per lb	1,320	
685 sheep, at $3 per head	2,955	
		6,275
Profit		$1,750

Greatest drawback is getting lambs in condition for wintering, as feed is dry when they are weaned.

G. E. Burnham, Minneapolis.—Began handling sheep here 18 months ago; was in the business in Ohio. Winters are drier; surface rolling and dry, so that sheep are more healthy than in Ohio, and foot-rot is almost unknown. Have 740 head, brought from Ohio. Don't think change of climate affects sheep, but change from tame to prairie grass is injurious, and should be brought earlier in the season to get used to grass before winter. Good grades of American Merinos are best in this section for all purposes. Increase in my flock, from 90 to 100 per cent. My sheep shear from 5 to 20 lbs. Sold clip of 1879 for 19½ cents. Profitable to keep wethers till 5 years old; ewes till 6 or 8. Losses are about 3 per cent. by natural causes; very small by all other causes. Herd on good range in summer, giving plenty of salt. In winter, feed corn, plenty of prairie hay and millet. When fed millet, less corn will do. Should have early-sown rye for lambs when weaned, and ewes in spring; always give plenty of salt, and water well. Have good warm sheds and ample yards. Many fail in sheep culture by neglecting to feed grain early in fall. One bushel fed moderately before sheep begin to run down, is worth ten fed strong after they get thin; it is false economy, for well-fed sheep will produce much more wool than if neglected.

John Lyne, Oak Hill.—Have raised sheep here 9 years; had some experience in England. Have 250 head; originally from Missouri. Sheep seem to do well brought from any other place here; the climate agrees with them. Common ewes, crossed with Lincolnshire or Cotswolds, make the best sheep for all purposes. Increase in my flock is a little more than double each year; heaviest fleece weighed 15 lbs., lightest 3, average 6, washed. Mutton sells at home for 3 cents, live weight. Sold clip of 1879 for 28 cents, washed; middling coarse wool most profitable. Wethers should not be kept for wool till more than 3 years old. Only losses are from natural causes, about 1 per cent. Herd in day and corral at night; keep them on the range and in stalk-fields summer and winter. Have stone corral, with sheds on the north side, racks to feed hay; cost is about $1 a head per year.

F. M. Underwood, Minneapolis.—Have raised sheep here 2 years; formerly in the business in Ohio. Have 262 head; natives. Believe a cross of Merino and Lincolnshire best for both wool and mutton. Fleeces average 5 lbs. Sold clip of 1879 for 20 cents. Think best to sell wethers for mutton when 2 years old. Herd in summer, keeping in sheds during middle of day; corral at night. My sheep cost a little over $500; they have brought me this year over $600, and the flock is now worth $650. Sheep will pay big, with the right kind of care.

T. E. Scott.—It is 13 years since I commenced handling sheep here; was in the business in Wisconsin. Don't have cold spring storms here as there. Have 1,400 head original stock from Wisconsin. Sheep brought here from Eastern States require a little more attention at first. Merinos are best for both wool and mutton. My sheep sheared this year 7 lbs., average. Mutton sells at home for 3½ to 4 cents. Sold wool in 1879 for 19½ cents. Merino wool most profitable. Sell off my sheep when 7 or 8 years old. Lose by natural causes about half of 1 per cent. annually; by wolves, 8 or 10 head.

My sheep are herded; corraled at night in a portable pen, changed every three or four weeks. Commence feeding grain lightly about October 15, increasing till they get one-half bushel a day to 100 head; give prairie hay and good bright straw. Prefer to have lambs come in May, as there is then plenty of grass for ewes. Wean lambs last of September, putting them on best grass, and feeding sheaf oats at night. About middle of December or 1st of January, put into winter quarters, letting them run to a straw-stack in day-time and keeping in warm sheds at night. Occasionally let them in corn-fields. Income from my flock of 1,200 head last year was $2,864.43. This State is peculiarly adapted to sheep raising, and it is very evident to me that there is more profit in them than in any other stock.

PAWNEE COUNTY.

H. J. Colvin & Son, Larned.—Have raised sheep here 2 years; previously in Michigan, Missouri, Colorado, New Mexico, California, Oregon and Nevada. Kansas has a much more extensive free range and abundance of grass than Colorado, California or New Mexico, and also an abundance of cheap grain and rough feed for winter. Have 800 in my flock; rams were bought in Michigan, New York and Vermont; ewes from Colorado and New Mexico; do not think Vermont, Pennsylvania and eastern New York sheep succeed well here first season; they do fairly the second year; Michigan sheep do much better, requiring but little more care than natives. Spanish Merinos crossed on native Mexican ewes produce most and best wool, and also make large mutton sheep. This cross will herd and thrive better in large numbers than any other; are also most prolific. Increase in my flock is from 90 to 120 per cent. per year. Market for mutton is to Eastern feeders, who pay 2 cents, gross. Price of ewes, $1.50 to $2.75; wethers, $1.75 to $2.50. My wool in 1879 brought from 18 to 22 cents. Merino most profitable grade of wool. It pays to keep wethers for wool till 3 or 4 years old; ewes should be disposed of before 6. Losses in my flock from natural causes from 2 to 3 per cent. annually. My sheep are herded, and corraled at night; have water fresh from a well; are taken out on the range early in the morning in summer, watered at noon, and taken out again at 2 P. M., when weather is not too hot, and grazed till dark; salted twice a week, with liberal amount of sulphur. Prefer corn and wheat straw with a run to grass in winter, with a sod wind-break and hay shed; millet mixed with straw is excellent. Greatest drawback, lack of knowledge of the business.

Jacob Bowman, Larned.—Have been in the business here 2 months; very little previous experience. Have 775 wethers that I am stall-feeding. Think a cross of Cotswolds and Merinos best for wool, Southdowns for mutton, and Cotswolds for both wool and mutton. Kansas City is our market for mutton; price $2.75 to $3 per head. Do not think sheep can be profitably kept after 5 years old. My flock is herded in day-time and corraled at night; have all the millet they will eat, and are thriving well on it. Think the only drawbacks to success are, want of shelter and care.

James Z. Rider, Larned.—Have been in the sheep business here since spring of 1878. Have 1,300 head, brought from Michigan. For wool, grade Merinos are best; for mutton, Southdowns; for both, a cross between Merino rams and Cotswold ewes. Annual increase has been 90 per cent. Fleeces average 8 lbs. Mutton sells for 2 to 3 cents at Larned. Price of ewes $2 to $4, wethers $2 to $3. Sold my wool in 1879 for 20 cents. Merino wool most profitable. Don't think sheep can be kept with profit after 4 years old. Herd in summer, keeping them in shade from 11 to 3 in hot weather; water at noon. In winter take out a few hours in middle of day to drink and graze. So far have fed no hay or corn, though corn would add to weight of fleece. Have kept no exact account, but profits greatly exceed losses.

PHILLIPS COUNTY.

James Scott, Kirwin.—Have been engaged in sheep culture here 3 years; had some experience in Illinois. Have now 1,100 sheep; stock came from Illinois and Wisconsin.

Spanish Merino best for wool and mutton. My sheep shear about 5½ lbs., average. Sold clip of 1879 for 20 cents. Sheep cannot be kept with profit after 5 years old. I lose annually about 3 per cent. of old sheep and 25 per cent. of lambs. In pleasant winter weather let them range on prairie, feeding about 5 bushels of corn per day from middle of November to April 1st. In stormy weather keep them in yards with good sheds and feed hay and millet, besides their regular ration of grain. Cost of flock and all expenses, $6,050; receipts and value of stock on hand, $6,854; showing profit of $800. Great drawback, want of tame grasses.

POTTAWATOMIE COUNTY.

Adam Scott, Westmoreland.—Have been raising sheep 7 years in Kansas; had 20 years' experience in Scotland. Cheap grazing, less loss from natural causes, and a higher price for wool, are some of the advantages here. Have 1,700 at present; have always bought rams of my neighbors; a cross of common Missouri ewes with Merino is best for wool and mutton; for mutton alone, Cotswolds and Leicesters. From Missouri ewes have raised 140 per cent. of lambs; but from their cross with Merinos, only about 90 per cent. Fleeces from my sheep will average 11 lbs. Wamego is our market for mutton; it brings $3.50 per 100, gross. My fine wool in 1879 sold for 21 cents, medium for 23; Merino wool most profitable. Wethers may be kept with profit till 3 years old, ewes till 7. My losses from natural causes about 1 per cent. per annum; disease, scarce any; dogs and wolves, about one-half of 1 per cent. each. My sheep herded on range all summer; when grass begins to dry up in fall, feed a little corn, increasing quantity as they get used to it; when frost kills grass, give hay at night and run on corn-stalks during day. About January 1st, give 1 bushel corn to each 100 a day, and plenty of hay; feed till grass comes, but continue corn till they can get full feed of grass. When the lambing season begins, is the time for the sheep farmer to exert himself, as much depends on his care then for the number of lambs he raises. Have tight board sheds for shelter in winter, with racks to feed hay from. Started with 8 ewes and 5 lambs 7 years ago, and have put the whole produce of the flock into sheep each year, until now I have 1,700, worth $5,000.

J. S. Codding, Louisville.—Have been raising sheep here 4 years; had previous experience in Illinois and Indiana. Don't know of any disadvantages for sheep raising here except that scab is brought in from other States; while dry feeding-grounds, healthy climate, and absence from all disease, are very favorable. Have now 600; ewes are natives of this county; rams from Illinois and New York. Spanish Merino most profitable for wool. Annual increase in my flock, about 93 per cent. Average weight of fleece, 8 lbs. Sold wool in 1879 for 18 cents. Fine grade Merino wool most profitable. Think it best to keep wethers for wool instead of selling at maturity for mutton. Good ewes may be profitably kept till 9 or 10 years old. Losses from natural causes among my sheep are about 2 per cent. per annum; disease or dogs, none; only lost 4 head in 4 years by wolves. My sheep are herded in summer and in open weather in winter. As soon as frost hurts grass, commence feeding old sheep by themselves, one-half bushel corn to each 100 per day, gradually increasing to one bushel when taken off the range; give hay in racks morning and night; corn in troughs in morning, and water at night; salt once a week. Wean lambs about September 1, and feed them oats and corn, increasing the ration gradually. My flock has netted me a trifle over 53 per cent. on capital invested.

RENO COUNTY.

J. S. Hauser, Hutchinson.—Bought my sheep in October, 1879; had some experience in the business in Missouri. Have 195, bought in this county. Most profitable breed for all purposes is Cotswold. Ewes are worth $2 each. Wethers should be sold at 4 years old, as they do not get any better after that age. My sheep are herded during day;

corraled at night. Two sides of corral are of hay, to which sheep have access and eat all they want. Turn them on prairie in good weather, and let them in stalk-fields when there is snow on the ground.

J. M. Sample, Hutchinson.—Have been raising sheep here little over a year; was in the business in Michigan. Have 200 now; bought them here; original stock came from Missouri. Cotswolds and Merinos mixed make most profitable cross for wool; Cotswolds best for both wool and mutton. Raised 86 lambs from 75 ewes. Southdowns and Cotswolds are most prolific. Fleeces from my flock average 4½ lbs. Ewes are worth $3, wethers $2.50. My wool, in 1879, sold for 20 cents. Long wool most profitable. Wethers should be sold when 2 or 3 years old; no sheep, unless extra-nice ewes, should be kept till more than 5 or 6 years old. Losses from natural causes about 5 head in 100, none by disease, only 1 by dogs, and none by wolves. Don't think sheep should be kept in corral any more than possible. Always have them herded except in very bad weather in winter. Feed about 1 bushel of corn per head, and plenty of hay. Have a good shed. Profit on my flock last year was 100 per cent. on amount invested. Don't think there is any drawback to success in Kansas. I have had no trouble, except that my sheep were infested with lice.

B. F. Gehman, Hutchinson.—Have owned sheep here 1 year; had some experience in Ohio; find less trouble here, on account of mild winters, and we can keep our sheep on range most of the time during winter, where they find pretty good feed. Have now 922 head; ewes from Colorado, rams from Vermont. Would not like to risk sheep brought directly from the East the first season. Most profitable cross for wool is Colorado ewes first with Merino, and that crossed with Cotswold. Cotswold and Leicester are best for wool and mutton. Increase of my flock, 60 per cent. Heaviest fleece 13 lbs., lightest 2, average 4½. Mutton sells here for 2½ to 3 cents per lb., gross. Sold my wool in 1879 for 17 cents in Hutchinson, without expense of storage or sacking. Medium wool most profitable. Wethers should be sold at maturity; sheep may be kept with profit till 5 or 6 years old. My losses are about 2 per cent. from natural causes; 5 or 6 died from rattlesnake bites (would like to find a good cure for this trouble); these were the only losses sustained from any cause. My flock is herded, corraled at night; summer and winter have them on range, unless weather is too inclement; feed each one about 3 lbs. hay and half a pound of corn daily during winter; have good straw sheds in corral. Figures on my flock show a net gain of $66, with hay, corral, etc., on hand for next year. Think it an advantage to have goats with sheep, as they are a protection against dogs and wolves, and the odor is beneficial; should be 2 goats to 100 sheep. Carelessness on part of owners is the greatest drawback to success.

Hale & Conn, Hutchinson.—In the fall of 1876, brought 1,300 sheep from southern Missouri; shortly after, they took the scab, and we lost over 500 that winter. This is the only disease our sheep have been troubled with, and it can be avoided by dipping in tobacco-water once a year. Our sheep are now doing well, and we have every reason to believe we shall make the business a success.

John H. Medberry, Castleton.—Have been in the business here 3 years; had previous experience in Indiana. Have now 22 head; ewes came from Texas, ram from Missouri. Think Cotswolds best for any purpose. Average annual increase of my sheep has been 100 per cent. Average weight of fleece from this flock, 5 lbs. Hutchinson, market for mutton, at 2¼ cents per lb., gross. Sold my wool in 1879 for 15 cents. Combing-wool most profitable. Wethers may be profitably kept for wool until 3 years old. Sheep don't pay after 5 years old. Per cent. of losses from natural causes among my sheep, about one-tenth; no loss from disease or dogs; by wolves, about one-twentieth; and from all other causes, about three-twentieths. Herd during day, corral at night. Have a wind-break. Three years ago bought ten head for $20. Cost of keeping has been too

small to be estimated. Sold $25 worth, and have on hand 22 head, worth $44. Western sheep do best here; Eastern sheep have to become acclimated. Wolves are bad, and sheep are liable to scab. Wool is liable to get sand-burs and cockle-burs, but sheep can be kept from where burs grow.

REPUBLIC COUNTY.

W. P. Weeks, Belleville.—Have been engaged in sheep raising here about 4 years; previously in New York State. Cheap feed and short winters are advantages of Kansas. Have now about 400; rams from Nebraska; ewes from Missouri. Think Merino best for wool; for both wool and mutton, cross of Merino rams with common Missouri ewes; for mutton, Cotswolds. Increase in my flock, about 80 per cent. Coarse-wool sheep most prolific. Fleeces from my sheep average 5 lbs. Kansas City is our mutton market; price, 3 to 4 cents, gross. Price of ewes, $3; wethers, $3.50. Sold wool in 1879 for 23 cents. Medium wool most profitable. Sheep may be profitably kept till 4 or 6 years old. My losses from natural causes, about 3 or 4 per cent. per annum; none by disease; by wolves and dogs, slight. My sheep are herded in day-time; corraled at night. Are sent out to grass early mornings; watered about noon; do not keep them too much bunched up, either night or day; give salt once a week; good sheds are necessary, and good protection from cold winds; let them run in corn-fields as much as possible, and feed plentifully with corn and oats. Think I make 40 per cent. net profit on my flock. A little more care in selecting good blooded rams, and in time of coupling would be an advantage. One early lamb well fed is worth two late ones; lambs should be weaned at four months and put on good feed. It pays to sow plenty of rye for pasture; keep lambs on it, and in spring either plow it up and sow millet or cut while the seed is in dough and put in stack for hay.

Adam Dixon, Belleville.—Have been engaged in sheep raising here 2½ years; previously in New York. After observation in England, Scotland and the wool-growing portions of America, think Kansas without a rival as a wool and mutton-producing State. My flock numbers 384; original stock from Missouri. For wool, best cross is half and three-quarter American Merinos; for mutton, Southdowns crossed with Merino bucks; for both wool and mutton, first cross between Merino bucks and Southdown, Leicester or Cotswold ewes. Sell mutton in Kansas City for 4 cents. Clip of 1879 brought 22 cents. Most profitable wool, half or three-quarters Merino. Ewes may be kept with profit till 5 years old, wethers till 4. My losses from any cause, very small—one by dogs and 6 by smut in 30 months. My flock is herded in summer; confined in barn and sheds at night. About middle of May, sheep will get plenty of feed on the prairie; give plenty of salt, and provide good well-water; shelter from heavy rains; use pine-tar freely on the noses of old sheep. Wean lambs at about 4 months old, turning on early-sown rye, which puts them in fine order for winter. Good shelter, plenty of hay and water, with half a pint of corn and oats mixed once a day, will carry lambs well through winter. For winter feed, no grain is equal to corn; feed with the husk on, 3 or 4 ears per head daily from November till lambing time; then give corn and oats crushed, bran or mill-feed, giving one pint a day till grass can be had in plenty. Breeding-ewes do best if allowed to run on pasture an hour or two every pleasant day. Ewes, lambs and wethers must be kept in separate flocks in winter. Rams should have extra feed while with ewes; feed and care at this time will pay better than money in bank. I began with 311 head, costing $957; have sold in all, wool, etc., to the amount of $1,483.32; and have now on hand 384 head, worth $400 more than the original stock. As to best grade of wool to raise here, I wanted the opinion of a practical manufacturer, and sent a sample (one-half to three-fourths Merino) from my flock to the Buell Manufacturing Company at Blue Rapids. Under date of January 29, 1879, Mr. W. P. Buell writes: "Samples of wool received. I pronounce this just the right grade; and when all your

flock is the same, you will have the best that can be grown for our use, or for most purposes, and I think it will be some time before there will be enough of this grade of wool grown in this country."

J. M. Shepard, Seapo.—Have been in sheep business here 2 years; had some experience in New York. Good climate, cheap food and dry winters are advantages here. Have 600 head; original stock from Missouri and Ohio; all did well first season; cross of Cotswold and Merino is best for both wool and mutton. My sheep increase 80 per cent.; sell mutton in local market for 2½ to 3 cents, gross. Price of ewes $3.50, wethers $3. Sold clip of 1879 for 22½ cents; combing-wool most profitable. Ewes can be kept with profit till 6 years old, wethers till 3. Losses about 2 per cent. by natural causes, 2 head killed by dogs, 2 by wolves. Herd in summer, corraling at night; salt twice a week; have good range, with plenty of water. In winter have open sheds, covered with hay; feed plenty of hay and a bushel of corn to each 100 per day; in fair weather turn into stalk-fields. Can't give accurate statement of expense, etc., but have made 50 per cent. on investment. Anyone with small capital who will take proper care of sheep, will find it pleasant and profitable business; it takes no science, only common sense enough to give them plenty to eat and drink, and humanity enough to provide warm shelter against cold and wet.

Stephen Bradley, Brantford.—Have raised sheep here 4 years; formerly in the business in England. Have 195 head. Procured original stock in Missouri. Best sheep for wool is a cross of small Merinos with Leicester or Cotswold; for both wool and mutton, Leicester and Southdown. My flock shears 5 lbs., on an average. Price of ewes $2.75, wethers $3. Sold wool in 1879 for 22 cents. Wethers may be kept with profit till 2 or 3 years old; ewes till 5. Annual loss by natural causes about 5 per cent. Herd from April 15th to November 15th; corral at night; give salt mixed with sulphur and wood ashes once a week. In winter let them run an hour or two each day in corn stalks, keep in corral rest of the time; feed a little corn when they get none from the stalks. Drawbacks are, scab, and not knowing how to manage sheep.

John Harris, Cuba.—Have raised sheep here 5 years. Have a flock of 561; bought them in Kansas; original stock from Minnesota. Most profitable cross for wool is between coarse-wooled ewes and Merino bucks. Annual increase in my flock is 55 per cent. Fleeces from my sheep average 5½ lbs. St. Louis is our market for mutton. Ewes are worth $3.25; wethers, $2.50 to $3. Sold my wool in 1879 for 22 cents. Medium wool most profitable. Sheep may be kept with profit till 5 years old. My losses are about 3 per cent. from natural causes; none by disease; dogs have killed 2 head; wolves have troubled me some this season for the first time. Herd my sheep in summer; corral at night; twice a week give salt and wood ashes mixed half and half, once a month sulphur in place of ashes; tar their noses in spring with pine-tar. In winter, keep in corn-fields and on prairie part of the time; feed plenty of straw, some hay, and a little corn; have a good shed covered with hay. Total first cost of flock was $412; total cost for all expenses for 5 years, $768.28; have sold in that time wool for $1,327, mutton $267, and have on hand 561 sheep, worth $1,402. Wolves and dogs only drawback to success here.

Squire J. Pate, West Creek.—Commenced raising sheep here in September, 1877; have 380 head; ewes from Missouri, bucks from Michigan. Cotswold or Lincolnshire ewes, crossed with Merino bucks, make best sheep for any purpose. Annual increase in my flock, 60 per cent.; average weight of fleece, 5½ lbs. Concordia is our market for mutton, at 2½ cents, gross. Price of ewes $2, wethers $2.50. Sold my wool in 1879 for 22 cents; medium wool most profitable. Does not pay to sell wethers at maturity for mutton; more profit in keeping for wool till 9 or 10 years old. Losses in my flock about 2½ per cent. annually from natural causes, 1½ per cent. by dogs, none by disease or wolves.

My sheep are herded in summer, corraled at night. In winter, are fed morning and evening; have free access to good pure water and salt at all times; about 1½ bushels of corn per head, and a ton of hay to 10 head; access to good, dry sheds, protected from cold winds and storms. In summer, get them on range early in morning, take to shade about 10 o'clock, where they will stay till about 3, then let them feed again till dusk, when they are corraled. Total expense of my flock was $211.80; value of wool sold, $459.87; value of increase of flock (150 head), $225. Only drawback to success in sheep raising is pure carelessness. My experience is, that sheep culture is the most profitable business one can engage in. Some persons have had trouble with scabby sheep. This disease can be cured with very little trouble and expense.

RICE COUNTY.

John M. L. Gore, Raymond.—Have been engaged in sheep culture here 3 years; had a little experience in Illinois. Have now 1,150 head; bought rams in Illinois; ewes were from Missouri and Colorado. Pure Merino sheep are most profitable for wool; for wool and mutton, medium-wool ewes crossed with Merino bucks. Average increase in my flock, 70 per cent. Fleeces average 4 lbs. Sold clip of 1879 for 23 cents. Medium wool most profitable. More profit in keeping wethers for wool than selling young for mutton. Losses about 5 per cent. per annum, by natural causes; same by all other causes. Herd in summer; put in a portable corral at night, moving it every three or four days, and changing range about once a month. For winter feed, prepare hay and corn, and depend on prairie grass and stalk-fields for balance; feed about a bushel or bushel and half of corn to the head; have so much good grass this year they have not had much corn. Have sheds with sod wall on three sides to break wind. Total expense of my flock from the first, $814; sold wool and mutton, $1,490; have on hand 613 sheep worth $1,839. Only trouble in sheep business is caused by neglect.

RILEY COUNTY.

H. Wiesendanger, Randolph.—Have been engaged in sheep raising here 5 years. Have now 300 wethers. Original flock partly from Missouri, partly from Iowa. Merinos most profitable for wool; for wool and mutton, Cotswolds or Southdowns. Heaviest fleece from my flock weighed 12 lbs., lightest 2, average 5½. Price of ewes, $2.50, wethers $3. Sold my wool in 1879 for 20 cents. Fine wool most profitable. Better to sell wethers at maturity than to keep longer for wool. Losses from natural causes about 2 per cent., wolves 1 per cent., none by disease or dogs. Herd my sheep about 8 months. Feed on corn and prairie hay, or good millet alone, in winter. Have a good warm shelter. Paid for original stock $660, expense of keeping $1,400. Sold $2,300 worth of wool, and $600 worth of wethers and stock sheep; sold 570 ewes for $1,280, and have stock on hand worth $900. Long winters and lack of range are drawbacks in this section. We have no herd law, and cattle can run at large, but sheep must be watched all the time.

J. H. Lee, Manhattan.—Have kept sheep here only 2 years. Am sure that with proper care there is more money in them than in almost any other kind of stock. Beginners should commence with a small flock. Buy best natives that can be found; cross with Merino rams raised here. Acclimation process is the severest ordeal the sheep raiser has to pass through. Cheap sheep from Missouri or Iowa will almost surely be decimated in process of acclimation.

Winkler Brothers, Winkler Mills.—Commenced raising sheep here 7 years ago. Have 1,200 head; original stock from Illinois. Merinos crossed by Cotswolds or Lincolnshires are best sheep for wool; for wool and mutton, Cotswolds or Lincolnshires. Average increase in our flock, 33 per cent. Fleeces will weigh 6 or 7 lbs. Sell mutton at home for 3 to 3¼ cents. Price of ewes, $2; wethers, $3.50. Sold wool in 1879 for 18½

cents. Medium wool most profitable. Sheep may be kept profitably till 4 or 5 years old. Losses are about 1 per cent. from natural causes; occasionally have one killed by dogs or wolves. Herd during summer, corraling at night. In winter, feed a bushel of corn a day to each 100. Have a good rye-field for winter, and early spring pasture. Sheep must have good shelter for winter. Our account is thus:

1,000 head of sheep, at $2.50	$2,500 00	
Corrals, etc.	500 00	
		$3,000 00
Interest on $3,000	$300 00	
Shepherds' wages	350 00	
1,800 bushels corn, at 20 cents	360 00	
Shearing, at 6 cents per head	60 00	
Salt, etc	50 00	
		1,120 00
Sold wool, 6,000 lbs., at 20 cents	$1,200 00	
150 wethers, at $3.50	525 00	
150 ewes, at $2	300 00	
		2,025 00
Net profit		$905 00

With more sheep on hand than the 1,000 head.

ROOKS COUNTY.

R. E. Cooper, Ash Rock.—Have been raising sheep here 3 years; several years in Iowa. Had to feed hay and corn there 6 months in the year; feed no hay here, have buffalo grass instead, and feed corn only 4 months; no long, wet spells here. My flock numbers 350; ewes from Iowa, rams from Clay county, this State. Merinos are most profitable for wool; Southdowns for mutton; for both wool and mutton, Shropshires. Annual increase in my flock, about 75 per cent. Fleeces average about 5 lbs. Sell mutton to home butchers at 3 cents, gross. Sold my wool in 1879 for 24 cents. Fine medium most profitable. Best time to sell wethers is from 4 to 6 years old. I lose about 10 per cent. annually by natural causes; none by exposure after shearing, or dogs; wolves killed 14 lambs last spring. My flock is herded; not corraled much of the time; have a good shed of forks and poles, with dirt roof; feed 1½ bushels corn per head during winter, and they have buffalo grass in place of hay.

Cost of flock	$800 00
Sold 200 sheep	$550 00
Wool	625 00
Stock on hand	1,000 00
	$2,175 00

Scab is the only drawback; but that is easily cured. Sheep should be watered in a trough or tank; think going to a pond or stream is not good for them.

J. W. Anderson, Stockton.—Have been raising sheep here 3 years. Have 72 head; rams raised here, ewes in Missouri. For wool, a cross of Cotswolds and Merinos is best; for both wool and mutton, a cross of Cotswolds and Southdowns. Annual increase of my flock, 50 per cent. Heaviest fleece weighed 15 lbs., lightest 2, average 5. Price of ewes, $3; wethers, $2.50. Sold my wool in 1879 for 18 cents. Medium wool most profitable. More profitable to keep wethers for wool than to sell for mutton. Sheep may be profitably kept till 6 or 7 years old. Have lost 8 or 10 per cent. by natural causes; 1 per cent. by dogs; none by disease, exposure after shearing, or by wolves; 25 per cent. from scarcity of feed and want of proper protection. In summer, herd through the day, and corral at night. In winter, herd part of each day, feeding in corral at night with straw, corn fodder, and about half a bushel of corn to each sheep during the latter part of winter. Have good sheds.

Cost of my flock	$150 00	
Expenses	85 00	
		$235 00

Receipts for wool	$130 00	
Receipts for mutton	45 00	
Value of stock on hand	210 00	
		$385 00
Net profit		$150 00

Greatest drawback, want of tame hay for winter feed.

Eli Sherman, Belmont.—Have raised sheep here 4 years; 20 years in the business in Wisconsin. Cheap land, cheap feed, dry climate and mild winters are advantages Kansas has as a sheep country. Have 800 in my flock; rams brought from Wisconsin, ewes from Wisconsin and Missouri. Merinos are most profitable sheep for all purposes. Increase in my flock, from 35 to 50 per cent. Average weight of fleece, 7 lbs. Price of ewes, $3; wethers, $2.50 to $3. Merino wool most profitable. Sheep may be profitably kept until 7 years old. Have lost by natural causes from 1 to 3 per cent.; none by disease or wolves; a few killed by dogs; some died apparently from eating dry buffalo grass, others from eating too much corn. They are herded in summer; corraled at night. About November 1, commence feeding corn or corn stalks; stormy days, are kept up and fed on corn or millet; in good weather, turned on buffalo grass. Reckon cost of keeping at $1 a head per year. If sheep are brought here healthy, they will soon become acclimated; but need good care first season. Greatest trouble is lack of fall feed; raising of tame grasses is most needed for success here.

W. A. Cooper, Ash Rock.—Have owned sheep here about a year; have 125 head, all raised in Kansas. Shropshires are most profitable for all purposes; a flock well cared for will increase by as many lambs as there are ewes. Price of ewes $2.50 to $3, wethers $2.75 to $3. My wool in 1879 brought 24 cents, unwashed; medium wool most profitable. Sheep may be profitably kept as long as they shear a good fleece. Losses are about 10 per cent. per annum from natural causes. My sheep are herded on buffalo grass the year round; in summer lie out on the prairie; in winter turn in corn-fields, or on prairie, when not too stormy. Good sheds are necessary; hay or straw should be fed when ground is covered with snow. Only drawback to success I know of, is scab, and that is no worse here than in other States.

Louis Bigge, Stockton.—Commenced raising sheep here in March, 1879; previously owned a few in Illinois. Have now 700, Kansas stock, but were originally from Missouri and Wisconsin. Merinos and Leicesters are best for wool, Southdowns for mutton, cross of Spanish Merino and Southdown for both wool and mutton. Increase in my flock last season, only 22 per cent.; fleece averaged 5 lbs. Price of ewes $2.50, wethers $3. Sold my wool for 20 cents, unwashed. Think sheep may be kept with profit till 5 years old. Losses in my flock from natural causes, 5 per cent. My sheep are herded day-time, corraled at night. Can't give cost., etc., not having kept sheep a winter. Think that with proper care sheep raising must be a success.

RUSSELL COUNTY.

E. O. Church, Lura.—Have been engaged in sheep husbandry here 8 years. Have 4,000 head now. Obtained Merino rams and ewes from New York; main herd of ewes from Colorado. A cross from Mexican ewes with long-wooled American Merino rams is best for wool and mutton. Average annual increase in my flock 90 per cent. of breeding-ewes. Long-wooled sheep are most prolific. Kansas City is our market for mutton; price 3½ cents, gross. Sold my wool in 1879 for 20 cents. Medium-long fine wool most profitable. Most profitable to keep wethers till 3 years old; ewes as long as they will breed. Loss from natural causes about 6 per cent.; have had no loss by disease, dogs or wolves. My sheep are herded day-time and corraled at night. The flock is divided into different classes—ewes, wethers, etc.—and kept in separate herds summer and winter; are kept on range all the time except when ground is covered with snow;

then they are fed with millet. Lambs are dropped in May. Shearing begins June 1st. All stock is thoroughly dipped in strong tobacco juice spring and fall. Have open sheds facing south, made of lumber. Can't tell exact cost and profit, but stock I have let out on shares has paid 33⅓ per cent. It is an advantage to have milk goats in lambing time, being good to feed disowned lambs till a mother can be found—two ewe goats to 100 ewes. Know of no serious drawbacks to success in this section. Think it will prove the most profitable business farmers can engage in. Rye, millet and rice corn should be raised for feeding sheep—especially the latter, which I consider superior to anything else, and before long it will be one of the leading crops of the State.

W. C. Hobbs, Russell.—Have been raising sheep here since 1875. Have at present 1,500 head; original stock of ewes were native Kansas sheep; some of the rams were from Vermont, some bought here. Graded Merinos are most profitable for any purpose. Fleeces from my sheep averaged between 3 and 4 lbs. Only home market for mutton, selling for $3 per 100, gross. Price of ewes, $3; wethers, $2.50. Sold wool in 1879 for 20 cents. Medium fine most profitable. Sheep may be kept with profit till 6 years old. Losses from natural causes, about 1 per cent. last season; none by disease, dogs or wolves. My sheep are herded during day; kept in portable corral at night. Have good comfortable sheds for winter, and permanent corral with plenty of water in it. Feed them hay, millet, straw and corn fodder and plenty of corn. Cannot give figures of expense and profit. Had a number of goats with my sheep at one time, but see no advantage whatever. Drawbacks in Kansas, want of good shelter, good care and plenty of food and water; with these any man can make sheep husbandry pay.

Henry O. Gifford, Russell.—Have been raising sheep here since September, 1874; many years' experience in Vermont; some in Colorado. Abundance of winter feed, fewer severe storms and a much better climate are among the advantages over Colorado; the superiority over Vermont is too obvious to mention. Have 2,500 head in my flock; rams from Vermont; original flock of ewes from Colorado. Consider high-grade Merinos best for all purposes. Average annual increase in my flock, 90 to 100 per cent. Fleeces average between 7 and 8 lbs. Have usually sold mutton in Chicago for 4 to 6 cents, gross. Price of ewes, $1.50 to $5; wethers, $1.50 to $2.50. Sold clip of 1879 for 33 cents. Medium wool most profitable. Ewes may be profitably kept till 8 or 9 years old; wethers till 4 or 5. Have incurred a loss of about 1 per cent. annually from natural causes; never lost any by disease, dogs, or exposure after shearing; lost a few fat sheep last winter by accident; in 4 years have lost about 20 by wolves. My flock is herded; confined in corral at night. My sheep range during the whole year, in herds of 1,000 to 2,500; go out about sunrise and come in after sunset, summer and winter. Have good sheds, but use them mostly in lambing time. We have never fed over 15 or 20 tons of fodder (millet and hay) to the 1,000 head in any winter; in most winters give one-fourth to 1 bushel of grain (corn or rye) per head. Sheds should be of the capacity of 2½ or 3 square feet per head. Cannot give exact figures; but with good management, may reasonably expect from 50 to 75 per cent. profit. Formerly kept goats, but have discarded them, as advantages did not offset damages. My experience has been exceedingly favorable in sheep culture in Kansas. After visiting California, Colorado, New Mexico and Texas, I am very well satisfied with this State; for fitting mutton for market, no section is superior. Climate is always dry in winter, and but little mud.

A. S. Eaton, Russell.—Have been handling sheep here 5 years; previously in Vermont and Colorado. Have 1,500 head. Original stock of rams from Missouri; ewes from Illinois. Rams from the East should be acclimated before using. Merino sheep are best for all purposes. Average increase, 95 per cent. My flock sheared an average of 6 lbs. Chicago is our mutton market; averages 3½ to 4 cents. Sold clip of 1879 for 28½ cents. Medium wool most profitable. Most profit in selling wethers for mutton at 4 years

old. Only losses are from natural causes, about one-half of 1 per cent. a year. In summer, herd, corraling at night. In winter, feed one-half bushel of corn per day with good range, or small feed of hay or millet at night. Think 50 cents per head annually will keep sheep in this State. My profit is 50 per cent. a year on the investment. Drawback, bad management.

D. V. Marr, Paradise.—Have been in sheep business here 3 years; handled them in Colorado. Have 1,500 head; original stock of ewes from Colorado, rams from Vermont. For wool and mutton, a cross of Merino rams and Cotswold ewes is best. Increase is 80 per cent.; Mexican ewes are most prolific; average weight of fleece 5 lbs. Sell mutton at home for 3 cents, gross. Sold wool in 1879 for 20 cents; grade Merino most profitable wool. Not profitable to keep sheep after 4 or 5 years old. Lose annually by natural causes 2 per cent., all other causes 4 per cent. Herd in day during summer, corraling at night; salt twice a week; have good board shed for shelter; dip once a year, just after shearing; change three or four times a year. In winter, have timber shelter from wind; feed corn and some millet; prefer oats or mill feed for lambs. Cost is as follows: Herding $300, extra help in lambing $75, shearing $40, dipping and salt $80, total $495. Wool sold $849, increase by lambs $1,000, total $1,840; net profit $1,345.

SALINE COUNTY.

A. N. Case, Bavaria.—Have been engaged in sheep husbandry here 6 years. Have 200 now; originally from Michigan. Most profitable grade for wool, three-quarters Merino and one-quarter Cotswold; for mutton, Southdown; for both wool and mutton, one-half Merino and one-half Cotswold. Southdowns are most prolific. Salina is the market for mutton; 3 cents, live weight. Price of ewes, $2.50 to $3.50; wethers, $3 to $4. Sold clip of 1879 for 20 cents. Sheep may be kept with profit until from 5 to 7 years old. Lose about 5 per cent. annually from natural causes; no loss by disease, dogs or wolves. My flock is herded in day-time, corraled at night. Have open sheds facing south for winter protection; are ranged out in fine weather, and fed with millet or corn; kept up in stormy weather, fed with millet, corn, straw and hay. Think want of care only drawback to success.

B. S. Bean, Salina.—Have been raising sheep here since 1873; have known something of the business since boyhood. Have 150 wethers that I am feeding, and 975 stock sheep out on shares. They were bought in Nemaha county, Kas. Shall cross my ewes with Southdown bucks this season, to get a good wool-and-mutton cross. Average increase of my flock about 4 per cent. Average weight of fleece, $5\frac{3}{4}$ to $6\frac{1}{2}$ lbs. Have sold mutton in Salina at 3 cents, gross. Sold wool in 1879 for 21 cents. Medium wool most profitable. Prefer keeping wethers till 3 or 4 years old, instead of selling younger for mutton. Annual losses about 5 head out of 1,000. Herd my sheep in day-time; corral at night. Have no account of expenses.

B. F. Robinson, Salina.—Have been engaged in sheep husbandry here 4 years; was brought up on a farm where sheep were kept. Have now 325; originally from southern Missouri and northern Arkansas. Merinos are best for wool; for mutton think Leicesters best. Fleeces from my sheep averaged $5\frac{1}{3}$ lbs. Sold clip of 1879 for 20 cents. Have had no losses except a few head killed by a wild-cat. Herd my sheep in summer, corraling at night. When grass begins to fail, commence feeding a little grain once a day, at regular hours. Have straw sheds with timber shelter for winter protection. Straw is stacked where they get it at pleasure; think straw better than prairie hay. Give a little corn fodder or millet once a day after winter has fairly set in. Want of tame grass for pasture is the only drawback. This season have sold 1,630 lbs. wool for $320; 100 wethers for $300; total, $620. The expense has been, for herding, $60; 270 bushels corn, $48.60; corn fodder and millet, $50; 4 barrels salt, $10; shearing, $21; total expense, $189.60. The lambs that I have raised will make the flock good for wethers sold.

SEDGWICK COUNTY.

Pink Fouts, Wichita.—Have been engaged in sheep business here 7 years. Have 700 head at present; original stock from Wisconsin. Merinos and their crosses are most profitable for wool and mutton; for mutton alone, Cotswolds, Southdowns, or any of the large, long-wooled breeds. Annual increase of my flock averages 65 per cent.; long-wooled breeds are most prolific. Heaviest fleece 16¼ lbs., lightest 5½, average 8¾. Average price for mutton, 3 cents, gross. Price of ewes, $4; wethers, $4 to $5. Sold clip of 1879 for 20 cents. Fine wool most profitable. Wethers pay best when sold at 3 years old for mutton. Sheep cannot be profitably kept over 7 years old. Losses are about 3 per cent. annually from natural causes; no losses by disease, dogs or wolves; 1 per cent. will cover loss from all other causes. My sheep are always corraled at night. In summer, herd on range, with access at all times to good running water. In winter, feed corn, hay and straw in corral, with free access to water: consider this very essential. In pleasant, dry weather, occasionally let them run in stalk-fields, if fields are free from burs. Sheds are of lumber, and roomy enough for all; corral situated so as to drain well, as sheep must be kept dry, and away from snow and rain. It costs about 75 cents a year for each sheep. Last winter we kept over 450 head—say $337.50; sold 3,936 lbs. wool at 20 cents, $787.20, and had 250 lambs at $1.50, $375, making total proceeds and increase, $1,162.20. Deduct $337.50, leaving $824.70; lost 11 head for the year, $44, leaving net profit of $780.70, or about 60 per cent. on the investment. Great drawbacks to success are inexperience, inattention and carelessness. Anyone embarking in the sheep business, and giving same care to it that he would to a mercantile business, generally makes it successful. Many seem to think all that is necessary to get rich is to buy sheep and put them on the range to shift for themselves. There is no doubt that this will be one of the leading wool and sheep-growing sections of the country, for dry soil and climate, and nutritious grasses, make it a pleasure as well as a profit to raise sheep.

Wm. H. Ranson, Wichita.—Have been raising sheep here 6 years; previously handled them in Illinois. Have now 62 head; original stock came from Illinois; think Cotswold best breed for both wool and mutton. Increase in my flock about 1 lamb to each ewe. Heaviest fleece from my sheep was 18½ lbs., lightest 7, average 10. Wichita is our market for mutton—3 cents, live weight. Sold my clip of 1879 for 24 cents; think Cotswolds as profitable as any to breed for wool. Best to market wethers at 14 months old, just after first fleece is taken off; ewes may be kept with profit till 6 years old. Losses from natural causes, about 5 per cent. per annum; none by disease, dogs or wolves; occasionally one from some other cause. My sheep are kept in a pasture with cows; they are not confined at night. In winter, kept in pasture, but are provided with a dry shed, to which they have access in case of wet and stormy weather; as soon as grass fails in fall, begin to feed corn, giving about 1 ear a day to each head; a little later they are turned on the growing wheat to graze; think this an advantage to the wheat. About Christmas take them off the wheat, and feed shock corn liberally until grass is plentiful in spring. They also have access to stacks of prairie hay. Each sheep gets about 4 bushels of corn during the winter. My flock shows a profit of $1,018.08 for the time I have been in the business. Had at one time 3 Cashmere goats, but found them a nuisance rather than benefit. Know of no drawbacks to success. Tame grasses for fall and spring pasture would be better than wheat and rye, because not so apt to scour.

Fox & Askew, Wichita.—Have been in sheep business here 5 years; had experience in England and Michigan. Believe Kansas to be the sheep country of the world, on account of dry and mild winters. Have now 700; original stock of ewes from Missouri, bucks from Kentucky, Wisconsin and Vermont. Sheep from Eastern States do not suffer by change if they receive same care as they are used to. A cross between Merinos and Cotswolds is best for both wool and mutton. Flock increases 100 per cent. a year. Sell our mutton in Wichita, for 3 cents, gross. Sold clip of 1879 for 20 cents. Better

to sell wethers at maturity than to keep for wool. No losses, except a very few head killed by dogs. Herded in summer; turned out early in morning; driven to water, and kept in shade during heat of day, grazing again towards night. In winter, kept in yards, and fed hay and corn; in wet weather, millet in place of corn. Sheep raising is sure to be profitable to the man who gives it reasonable care and attention.

A. J. Grainger, Wichita.—Commenced raising sheep a year ago. Have 500 sheep; ewes from Missouri, rams from Michigan. Think a cross of Spanish Merinos with grade Cotswolds best for any purpose. My flock sheared 6½ lbs. Sold clip of 1879 for 20 cents. Herd my flock in summer. In winter they require little but buffalo grass. Have corral, with wind-break and shelter on three sides. Shall feed corn, prairie hay and millet, as required. Drawbacks are, dogs, and want of care.

J. F. Bradshaw, Wichita.—Have been in sheep business here 5 years; previously in Kentucky and Michigan. Have now 500, native stock. Cross of Merino and Cotswold is best for both wool and mutton. Increase is about 100 per cent.; Cotswolds are most prolific. My sheep shear 7 pounds, average. Sell mutton at home for 3 to 5 cents, gross. Sold clip of 1879 for 20 cents. Wool from a cross of Cotswolds and Merinos most profitable. Sheep can be kept with profit till 6 years old. Have no loss except one killed occasionally by dogs. Herd in summer, corraling at night. In winter feed corn, about 3 bushels per head, and all the hay they will eat. My sheep have proven to be very profitable. Carelessness, and trying to winter on the range without feed, are the drawbacks.

SMITH COUNTY.

D. Kennard, Smith Center.—Have been engaged in sheep culture here 4 years. Have 1,000 head; the original stock of ewes came from Missouri; rams bred in Kansas. Think half-blood Merinos most profitable for wool; for mutton, Southdowns are preferable; for both wool and mutton, a cross of Southdown ewes and Merino rams. Average annual increase in my flock, 85 per cent. Fleeces average 4½ lbs. Send our mutton to Chicago and Kansas City, getting 3 to 4¼ cents, gross. Price of ewes, $3; wethers, $2. Sold my wool in 1879 for 21 cents. Medium grade most profitable. Think it profitable to keep wethers for wool till 4 or 5 years old. Six or seven years is as long as profitable to keep sheep. Only losses are about 2 per cent. a year by natural causes; about 1 per cent. by dogs. My sheep are herded during day; corraled at night. Have good sheds for winter, open south. Feed about 1 bushel of corn per head and 10 tons of hay to the 100 head, during winter. Drawbacks are, want of tame grass for pasture in fall and early spring, and distance to market.

A. S. Trumbull, Smith Center.—Have been in sheep business here 3 years; had previous experience in Wisconsin. Have 80 head at present; original stock from Wisconsin. Think a cross from Merino ewes with Cotswold bucks most profitable for wool; for mutton, Southdown or Hampshiredown. Annual increase in my flock, about 70 per cent. of the ewes. Coarse grades are most prolific. Heaviest fleece from my flock was 18¾ lbs., lightest 4, average 8. Mutton sheep sell in the local market for about $3 per head Sold clip of 1879 for 20 cents. Medium wool most profitable. Losses from natural causes, about 2 per cent.; no loss by disease, exposure after shearing, or wolves; only two killed by dogs in three years; lose about 1 per cent. in lambing time. My sheep are herded summer and winter; at night, kept in a corral made proof against dogs and wolves, and sheds on north and west sides. Have lambs come in May. Feed about 1 bushel of corn per head, with plenty of hay, during winter; much depends on regularity in feeding. Greatest drawback to success in sheep husbandry is the fact that people have not the sheep.

W. H. Kelly, Gaylord.—Have kept sheep here 2 years; previously in Wisconsin. The air is drier, climate better, grass more suitable, better range, no mud—all these are advantages of Kansas. Have no sheep now. For wool, Merinos are best; for both wool

and mutton, Southdown and Cotswold grades. My flock increased from 85 to 100 per cent. each year; fleeces from my sheep averaged 5 lbs. Most profit selling wethers at 4 years old; ewes may be kept till 6. Losses were about 5 per cent. annually from natural causes; no loss from any other cause except dogs, and they killed so many sheep I was forced to abandon the business. My sheep were herded days, and corraled at night. Every pleasant day in the year they were out on the range, and needed no other feed, except in winter, when they had a little corn night and morning; on stormy days gave them straw, hay or millet, with corn; had a good straw shed, but sheep did not go under it much, preferring the open corral. Cost of my flock, for herding, feed, salt, etc., 1 year, was $145; wool sold and increase in flock, $875. There is money to be made in raising sheep here; but it is a business, and a man that don't understand it better let it alone.

H. R. Stone, Oriole.—Began raising sheep here 14 months ago. Have 500, brought from Missouri. Consider Cotswolds and Southdowns crossed with Merinos best for any purpose. Saved about one-third the lambs last season. Fleeces averaged 4 lbs. Sold my spring clip for 20 cents; fall clip for 35 cents. Medium wool most profitable. Think sheep may be kept with profit as long as they have teeth. Herd on prairie summer and winter; let them run in corn-fields after corn is gathered. In winter feed a bushel of corn to 100 sheep a day. Have good shed open to south.

Cost of flock one year ago	$713 60	
Paid for feed	120 00	
Shearing, etc	40 00	
		$873 60
Wool sold	$460 00	
Value of stock	1,500 00	
		1,960 00
Net profit		$1,086 40

STAFFORD COUNTY.

J. S. Chandler, Our Carter.—Have been raising sheep in Kansas 3 years; previously in Colorado. Have now 2,080; original stock came from Missouri. Think Missouri ewes well graded up with Merinos make as good cross as any for both wool and mutton. Annual increase in my flock, about 80 per cent. Average weight of fleece, 4 lbs. Kansas City and St. Louis are our markets for mutton. Ewes are worth from $2.50 to $4, wethers $2. Sold wool in 1879 for 20 cents. Sheep may be kept with profit until 6 or 7 years old. Losses from natural causes, about 5 per cent.; about one-tenth of 1 per cent. by wolves; about 1 per cent. by rattlesnake bites. My flock is herded, and corraled at night. In winter, is put on range same as in summer, except on very stormy days; feed only hay, as we have buffalo grass that makes good winter feed; have no sheds, though it would be better for the sheep; have good wind-breaks for shelter from north winds. Don't think there are any drawbacks except neglect and inexperience. Believe Kansas better adapted to sheep than Colorado.

C. G. McNiell, Stafford.—Have been engaged in sheep business here about 4 years; previously in Iowa and Missouri. Have no foot-rot here as in Iowa; nor does it take half the winter feed that is necessary in Missouri. Have in my flock 107 head; original stock came from Missouri. Coarse-wooled ewes bred to fine bucks make best cross for all purposes. My ewes increase 100 per cent. each year. Fleeces from my sheep average 6⅓ lbs. Sold wool of 1879 for 28 cents. Cross between Merino and Cotswold or Southdown gives most profitable grade of wool. Wethers can be kept with profit till 4 years old; ewes till 6. Lose about one-tenth of the young lambs each year; none by disease, dogs or wolves; some by snake bites, but have used an ointment of gunpowder and lard with good effect, curing all on which we tried it. My sheep are herded with cattle in summer; have shelter from storms nights and bad days in winter; occasionally give them a run in stalk-fields; feed some millet and corn fodder; do not give

full feed two months during winter. When lambs are quite young, mothers and lambs are put on wheat or rye-fields. Great drawback to success is, lack of a little care at the right time.

SUMNER COUNTY.

Wm. J. Wilson, Wellington.—Have been engaged in the business here 18 months. Have 225 head; ewes from Arkansas, rams bought in this State. Fleece averaged 3½ lbs. Have sold my mutton at Wellington, for 2½ cents, gross. My wool of 1879 brought 19½ cents. Lost 225 head last season while being acclimated; have lost none from any other cause. My sheep are herded in summer; corraled at night. Last winter fed them on prairie hay and wheat straw, with about 3 pecks of corn per head; herding on prairie in good weather; had no protection but sod corral. My sheep cost $1.15 per head in Arkansas; cost of keeping has been about $500; have sold $240 worth of wool; my stock now is worth $850.

Henry Stunkel, London.—Have been raising sheep here 6 years; previously in Illinois. No foot-rot here; have known sheep brought here with that disease to get well without any treatment. Have now 695; ewes from Missouri, rams from Illinois. Best cross for wool is Spanish Merino rams on large, long-wooled ewes; for mutton, Southdowns are best; for both wool and mutton, half Southdown and half Cotswold. Annual increase in my flock, about 225 head a year. Fleeces from my sheep average 5 lbs. Sold wool in 1879 for 19 cents. A cross between Merino and Cotswold produces most profitable wool. Sheep may be kept with profit until 4 or 5 years old. Losses annually are about 3 per cent. of young lambs; about 1 per cent. by scab; about 2 per cent. by dogs; none by wolves, or exposure after shearing; about 1 per cent. stray or are stolen. Herd on prairie in summer. In winter, feed about a pint of shelled corn to each head per day, and what corn fodder they will eat; to fattening-sheep, in addition, graze them on wheat fields when ground is not too wet. They have no protection from the weather except a high bank, which breaks the wind. Have kept no exact account of cost. Want of tame grass is the only drawback.

WABAUNSEE COUNTY.

H. A. Stiles, Pavilion.—Have been raising sheep in Kansas 8 years; had experience in New York, Michigan and Iowa; Kansas is the best sheep country I ever saw. Have now 100; my Cotswolds from Canada, Shropshires from England. A cross of Shropshire and Merino is best for both wool and mutton. Fleeces from my sheep weigh from 5 to 10 lbs. Wamego, Manhattan or Topeka are our markets for mutton, at 3 cents, gross. Ewes are worth $3; wethers, $4. Sold my wool in 1879 for 22½ cents. Merino most profitable wool. Wethers may be profitably kept for wool till 5 or 6 years old. Losses annually from natural causes are about 2 per cent.; none by disease, or exposure after shearing; a few are killed by wolves; dogs cause most loss, and are the greatest trouble to the sheep farmer. My flock is kept in a pasture, and put in a good tight corral at night. In winter, should have all the good early-cut hay they will eat, and corn or oats once a day; should have change of feed as often as possible; sheaf oats are good, also shock corn. Salt once a week. Lambs should be weaned about September 1, put on tame grass or rye pasture and gradually accustomed to grain. Cost of keeping 100 ewes will be, for 1 year, $385; receipts from the flock will be $641. No drawbacks to success for the energetic man, unless it be worthless curs that destroy the sheep.

E. W. Watson, Alma.—Have raised sheep 6 years in Kansas. Have now 650; ewes originally from Michigan and Missouri, rams from Missouri and Kansas. Think high grade or pure Merino best for wool. Shall breed this year a Shropshire ram to high-grade Merino ewes, to produce sheep for both wool and mutton. My average increase is from 70 to 80 per cent. of the breeding-ewes. Fleece averages 6 lbs. Topeka is the market for mutton, at $3.25 to $3.80, live weight. Medium wool most profitable. Bet-

ter to keep wethers for wool till 3 to 6 years old. Lose by natural causes, 1 or 2 per cent. annually; none by disease; very few by dogs or wolves. My sheep are herded during day; corraled at night. As soon as grass is killed, begin feeding corn and hay as soon as they will eat it. Separate lambs from flock early in October, and put them on rye pasture. My corral is made with a tight board fence all around, with shed in north side. Cannot give exact figures as to cost, etc., but profits have been satisfactory. Want of tame grasses for late-fall and early-spring feed is the only drawback.

W. F. Cotton, Wabaunsee.—Have been raising sheep here 4 years; familiar with the business all my life, in Vermont. Have now 300. Original stock of ewes from Missouri; rams bred in Kansas. Cross between coarse long-wools and Spanish Merinos most profitable for wool and mutton; Cotswolds and Southdowns best for mutton alone. Increase in my flock about 80 per cent. Southdowns most prolific. Heaviest fleeces from my sheep weighed 12 lbs., lightest 2½, average 5. Only mutton I have sold was at Topeka, getting $5 a head for fat wethers. Price of ewes $2, wethers $2.50. Sold wool in 1879 for 18 cents. Sheep may be kept with profit till 5 or 6 years old. Losses will not exceed 5 per cent. per annum from all causes. Herd my flock on prairie in summer, corraling at night; have access to pure, running water daily. Salt freely once a week. Shear about middle of May; two weeks after shearing dip thoroughly in decoction of tobacco, to which is added a little carbolic acid. Have early-sown rye for fall pasture; cut hay as early as possible, and generally have corn in shock for winter feed. Have a good shed to protect them from storms. Feed hay twice a day in winter, and let them run on the rye-field an hour or two besides. First year my expenses were as follows:

110 sheep, at $2 a head	$220 00	
Interest	22 00	
Taxes	6 60	
		$248 60
Sold 550 lbs. wool, at 25 cents	$137 50	
70 lambs, $2 a head	140 00	
		$177 50

And had the original stock besides. Do not know of any drawbacks to success. Am satisfied that every bushel of corn fed to my sheep last year brought me 50 cents.

Wm. Horne, Alma.—Commenced the business here 4 years ago. Have 25 head; native stock. Consider Cotswolds best breed for wool and mutton. My flock doubles every year. Average weight of fleece 9 lbs. Sell mutton at home for $3 per 100 lbs. Sold clip of 1879 for 20 cents. Sheep cannot be kept with profit after 5 years old. Losses have been very small. Turn on prairie in summer, have a shed for protection from sun and storms; feed corn, hay and corn fodder in winter. My sheep cost for feed, $15; shearing, $3; total, $18; sold 225 lbs. wool at 20 cents, $45; 15 wethers for $48.30; total, $93.30. Profit, $75.30. Wolves are the worst drawback.

J. L. Muhlenbocher, Alma.—Have been engaged in raising sheep here 20 years; 12 years' experience in Germany. I find here better climate, summer pasture, and heavier fleeces on wethers than in Germany. Have 1,000 sheep; original stock from Missouri. Increase about 75 per cent. of ewes. Fleeces average 4¾ lbs. Sell mutton in Kansas City for $4.30 per 100. Clip of 1879 brought 22½ cents. Wethers should be kept for wool till 5 years old. Annual loss about 3 per cent. from natural causes; 5 per cent. by wolves. Herd a few weeks in spring, then leave to themselves; corral at night. In winter, feed corn in morning, oats at night; through the day, prairie hay and millet; water at all times; salt regularly. Have free access to sheds in cold and stormy weather. Wolves do more damage than everything else.

WASHINGTON COUNTY.

Wm. Nemitz, Washington.—Have been in the business here 6 years; have 150 now; ewes from Iowa, ram from Canada. Common ewes, crossed with Cotswold rams, are

best for all purposes. Increase in my flock about 85 per cent. annually; long-wooled breeds most prolific; fleeces from my sheep average 7 lbs. Have only local market for mutton, at 3 cents, gross. Sold wool in 1879 for 19 cents; medium wool most profitable; most profitable to sell wethers at 4 years old. Losses from any cause very small; none by disease; about 1 per cent. are killed by dogs, and occasionally one by wolves. My sheep are herded on prairie in summer, corraled at night; salted once a week; sheared about June 1st; dipped in tobacco juice after shearing; kept in corn-fields and on stubble most of the winter; fed millet twice a day; have straw shed for protection in winter. Have never kept any account of expense. Drawbacks are, scab and careless handling, both of which are unnecessary. Consider sheep culture the most profitable business a man can engage in.

John Bond, Washington.—Commenced raising sheep here in 1862; have now 200. Find them very profitable when taken proper care of; should have a dry place to stay at night; mine lie on side of bluffs both summer and winter; have never corraled them; feed four ears of corn per day to each. Half Merino is as good as any sheep. My flock average 8 lbs. of wool. If not well fed in fall and winter, are apt to lose their wool.

D. T. Molony, Washington.—Have been in sheep business 2 years here; had experience in Wisconsin; range better, and grain much cheaper here than there. Have 130 head; native stock. For both wool and mutton, a cross of Merino ewes with Cotswold bucks is as good as any. From 83 ewes raised 67 lambs. Fleeces averaged 6¼ lbs. Sell mutton at home for 3 cents. Clip of 1879 brought 21 cents. Most profitable wool, good medium. Sheep can be kept with profit till 5 or 6 years old. Losses are about 5 per cent. per annum. Herd in summer; corral at night. In winter, let them run in corn stalks, and feed hay and one ear of corn each day. Have a good shed for shelter. One year ago had 84 sheep worth $3 each; sold wool, $110, and sheep $55, and have 103 sheep worth $3 each. It pays to commence feeding grain lightly in fall, before sheep begin to lose flesh, for while kept in good order, they will not shed wool; but if allowed to run down, then fed grain heavily, they will lose most of the wool.

J. W. Bell, Washington.—Three years in sheep business here; formerly in New York and Wisconsin. Dry climate, mild winters, sheep not subject to diseases caused by close yarding, are advantages in Kansas. Have 100 head; rams from Iowa, ewes from Missouri. Merinos and Shropshires are best for wool; for wool and mutton, cross of Cotswolds and Southdowns. Average increase, about 75 per cent. My flock will shear 7¼ lbs. Sell mutton in home markets, for 2½ to 3 cents. Sold clip of 1879 for 24 cents. Medium wool most profitable. Can keep sheep with profit until 4 or 5 years old. Losses from all causes, about 2 per cent. per annum. Herd during summer, corraling at night. Give plenty of room in corral, and let them at liberty while feeding. Sow rye for fall and winter pasture. In bad weather, feed hay twice and oats once each day. Pays to feed grain all winter. Have good sheds, covered with rye straw. Cost of hay about $37.50, and grain $45, for 100 head for the winter.

Oliver Martin, Hanover.—Began sheep raising here 3 years ago. Have now 240; rams were natives, ewes from Arkansas. Long-wooled sheep are best for all uses. Raised 105 lambs from 130 ewes. My sheep shear from 6 to 8 lbs. Price of ewes, $4; wethers, $3. Sold clip of 1879 for 21½ cents. Long wool most profitable. Sheep will give a profit till 6 years old. Losses are very small—only about 15 head killed by dogs and wolves in all. Keep my sheep in pasture. Find millet best winter feed, with rye for pasture. Think goats an advantage—the scent will prevent disease.

WILSON COUNTY.

George Brown, Buffalo.—Have raised sheep here 11 years; had previous experience of 30 years in New York. Have 360 now; original stock from New York; saw no change during acclimation. American Merino and their crosses are most profitable for wool

and mutton; Southdowns best for mutton alone. Increase is from 80 to 90 per cent. per annum. Southdowns are most prolific. Average weight of fleece from my sheep, 10 lbs. 10 oz. Mutton sells for 2½ to 3 cents, gross, in home market. Sold my wool in 1879 for 19¾ cents. Wool from American Merino and its crosses most profitable. Pays to keep wethers till 3 or 4 years old for wool, instead of selling younger for mutton. Losses from natural causes are about 2 or 3 per cent. annually; no loss by disease or exposure after shearing; very rarely any by dogs or wolves. My sheep are herded, and corraled at night. Have sheds, with yards in front, sufficient to feed 500 sheep under cover. In hot weather they come to the sheds about 10 and remain in shade till about 3, then graze till sundown; always shelter them in storms. Aug. 1st wean the lambs and feed by themselves, giving each day bran and shorts mixed. About November 1st commence feeding corn, lightly at first, gradually getting up to full feed, which is about 1½ bushels to the 100 head; feed prairie hay twice a day, with occasionally a feed of sheaf oats, millet or wheat straw. Breeding-ewes are kept separate, and have corn fodder with other feed. As fast as lambs come, separate the mothers and lambs from main flock, and feed on bran slop, oats and turnips until grass is up sufficiently for good feed. Disbursements on account of my flock through the year were, $327.75; receipts, $1,882.09; leaving a profit of $1,554.34. Greatest drawback is, want of care by the owners. My long experience has taught me there is no business so profitable as sheep culture; in some cases the profit has been 70 per cent. on the investment.

WOODSON COUNTY.

Godfrey Weide, Woodson.—Have been engaged in sheep growing here 20 years; had experience in Germany from boyhood. Have 1,000 head in my flock now; original flock from this State. Have seen no difference in stock as to acclimation. Spanish Merino is most profitable for wool and mutton. For six or seven years past have raised 340 lambs from 350 ewes; fleeces from my flock average 12 lbs. Price of ewes $3.25, wethers $3. Sold wool in 1879 for 19½ cents; Merino most profitable wool; profitable to keep ewes as long as they will raise lambs. Losses in my flock are about 5 head a year. Herd my sheep during summer, and corral at night; in winter, keep in a barn, in separate pens, lambs, wethers and ewes; feed lambs shelled corn mornings, and sheaf oats nights, with all the hay they want; give ewes and wethers shock corn mornings, and hay at night; about two weeks before lambing, give ewes a little Hungarian or millet, with sheaf oats at night. Only drawback is, that most sheep raisers do not give feed enough.

J. H. Chandler, Rose.—Have been raising sheep here 4 years; had some previous experience in Vermont. Climate, unlimited pasture and good water, are natural advantages of Kansas. Have 400 sheep; original stock of ewes came from Illinois, rams from New York. For wool, Merino is best; for mutton, Cotswolds; for both wool and mutton, Merino grades. Average increase of my flock, 90 per cent. Cotswolds and Leicesters most prolific. Average weight of fleece from my sheep, 7⅓ lbs. Sold wool in 1879 for 20 cents. Sheep may be profitably kept till 6 or 8 years old. Losses from natural causes, about 2 per cent. a year; none by disease, exposure after shearing, or dogs; wolves kill about 1 per cent. My flock is herded, and always corraled at night; have good shade in hot weather; plenty of good water; salt once a week. Commence to feed about November 1, using 20 tons hay for each 100 head, and 1 bushel grain a day to the 100. Have bank wall and hay roof for protection. Good bright corn fodder is best feed for sheep. My flock gives a net profit of 40 per cent. Drawbacks to success in sheep culture are, indiscriminate breeding and neglect.

Karl Weide, Byron.—Have been raising sheep here 8½ years; had long experience in Germany. Have now 700 sheep. Original stock of ewes raised in Kansas; rams from New York. Cross between native ewes and Merino rams is best for all purposes. Increase in my flock, 200 each year. Heaviest fleece from my flock weighed 24 lbs., light-

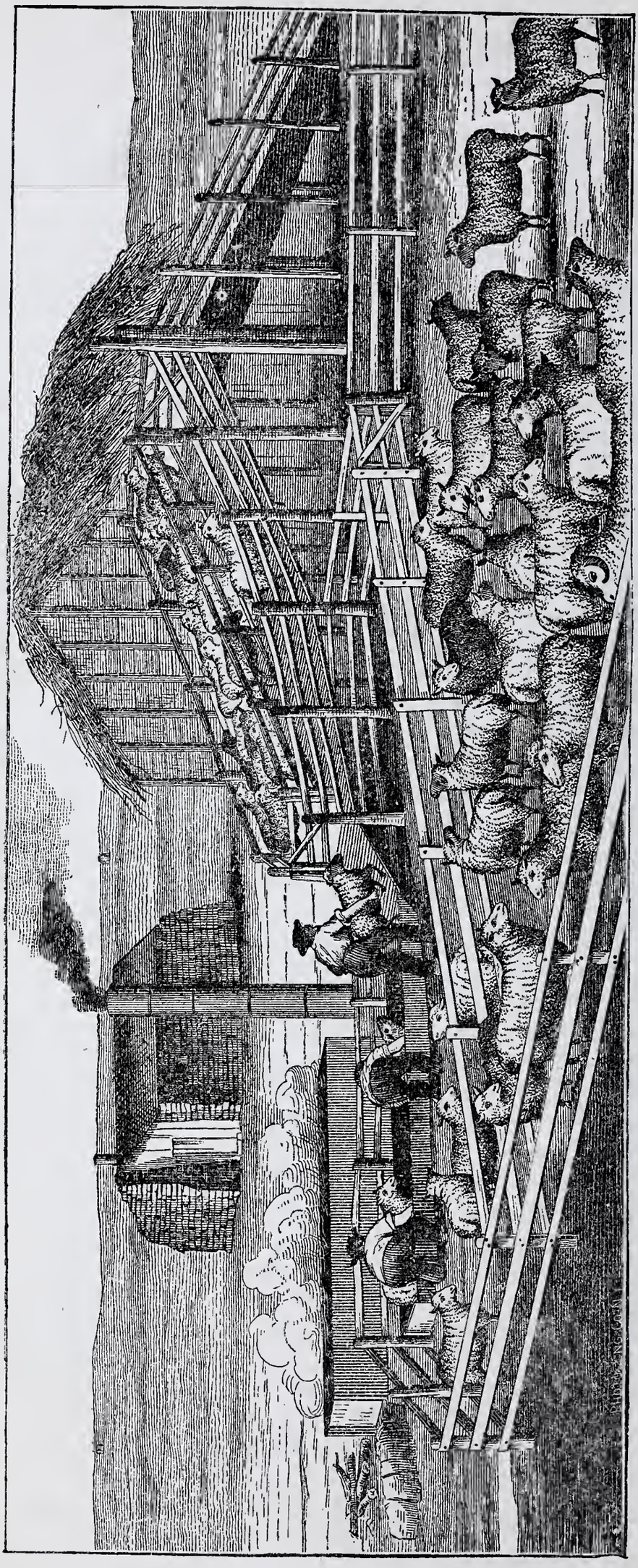
est 7, average 10. Sell mutton in St. Louis for 3 cents, gross. My wool for 1879 brought 19½ cents; medium fine most profitable. Sheep may be kept with profit till 8 years old. Losses from natural causes are about 2 per cent. annually; none by disease, dogs or wolves. In summer herd on prairie, corraling at night. Feed and water regularly in winter, in a good, warm shed. Give 1 bushel shelled corn per hundred in the morning; at night 2 bushels sheaf oats. This year the total cost was $900, receipts $1,443, profit $543.

E. Stockebrand, Yates Center.—Have been raising sheep here 18 years; had some experience in Germany. This climate is best, but grass and hay is not so good as there. Have 600 now; original stock from Missouri. Merinos crossed with heavy, long-wooled sheep are best for wool and mutton. Increase of my flock, 75 lambs to 100 ewes. Fleeces average 7½ lbs. Sold wool in 1879 for 19½ cents. Sheep may be kept with profit until 4 or 5 years old. Herd in summer, watering at noon, and keeping in shade during heat of day. In winter, keep in warm, dry sheds; feed all the hay of best quality they will eat; give free access to water; salt twice a week; feed about 2 bushels of corn to each 100 per day. Six hundred sheep at $3, $1,800; cost for feed, taxes, etc., $1,100. Sold wool, $900; increase of lambs, $440. So long as pasturage can be had on public lands, sheep will pay.

August Todmann, Yates Center.—Have 14 years' experience in sheep raising here; was in the business in Germany. Have now 500 sheep; original stock were natives. High-grade Merinos are best for wool and mutton. Increase is nearly 90 per cent. of ewes. Fleeces average 7½ lbs. Sold clip of 1879 for 24 cents. Merino wool most profitable. Pays to keep wethers till 6 years old, and ewes as long as they will have lambs. Losses from all causes, only one-eighth of 1 per cent. Herd in summer; keep in barn in winter. More grain fed the better; extra wool will pay for all grain eaten. Have lambs come in March, and feed high. Best to change feed as much as possible. Feed sheaf oats to ewes at lambing time.

D. E. Clapp, Yates Center.—Have been raising sheep here 3 years; have now 370, natives. Good Missouri ewes, bred to full-blood Merino bucks, will produce most profitable sheep for Kansas. Average increase, 85 per cent. of ewes; Cotswolds are most prolific; fleeces average 6¼ lbs. Sold clip of 1879 for 26 cents, in New York; Merino wool most profitable. Can keep wethers till 4 years old, ewes till 5 or 6, with profit. Lose about 2 per cent. annually from all causes. Herd in summer, corraling at night. Feed a little hay and grain about November 1, gradually increasing quantity to 1 bushel shelled corn a day to 100; feed millet and oats for change; have good warm sheds; feed ewes with lamb a little extra towards spring. Costs about $1 a head for keep annually; must have shade in summer. Think sheep more profitable than cattle, but they require a great deal more care.

Charles L. Clapp, Yates Center.—Have 3 years' experience in raising sheep here. Have 300 head, natives. Cross of Cotswolds and Merinos makes good grade for wool; for both wool and mutton, Cotswolds or Leicesters. Increase in my flock four-fifths number of ewes. Fleeces average 6¼ lbs. Sold clip of 1879 for 26 cents, in New York. Sheep can be kept with profit till 4 or 5 years old. Losses are about 2 per cent. annually. Herd in summer. In winter feed from 1½ to 2 bushels corn per head, and a ton of hay to 7 sheep. Have a good shed, open to south, on north side of corral, that they have access to at will. One dollar per head will take sheep through the year.



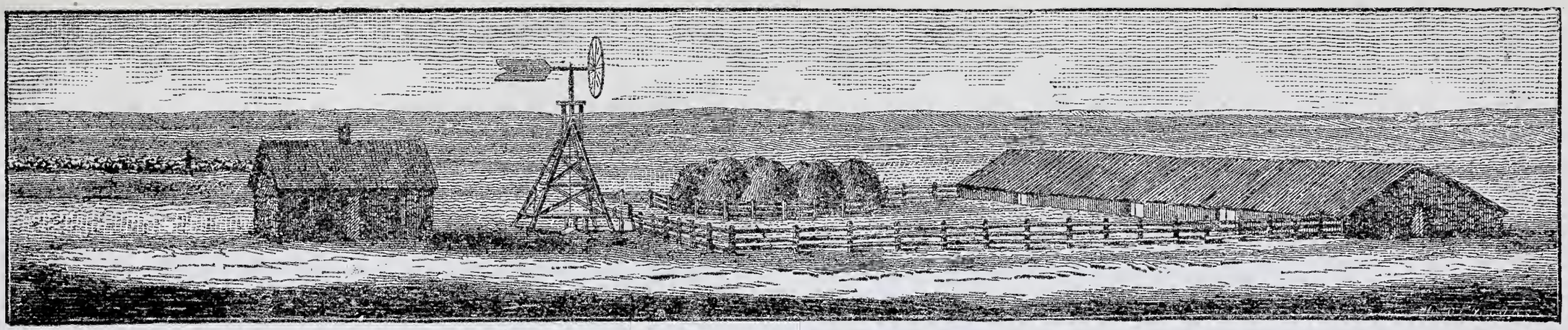
No. 1.—SHOWING MR. WADSWORTH'S ORIGINAL SOD HOUSE, WITH SHEEP-DIPPING ARRANGEMENT USED ON HIS FARM.

A KANSAS SHEEP AND GRAIN FARM.

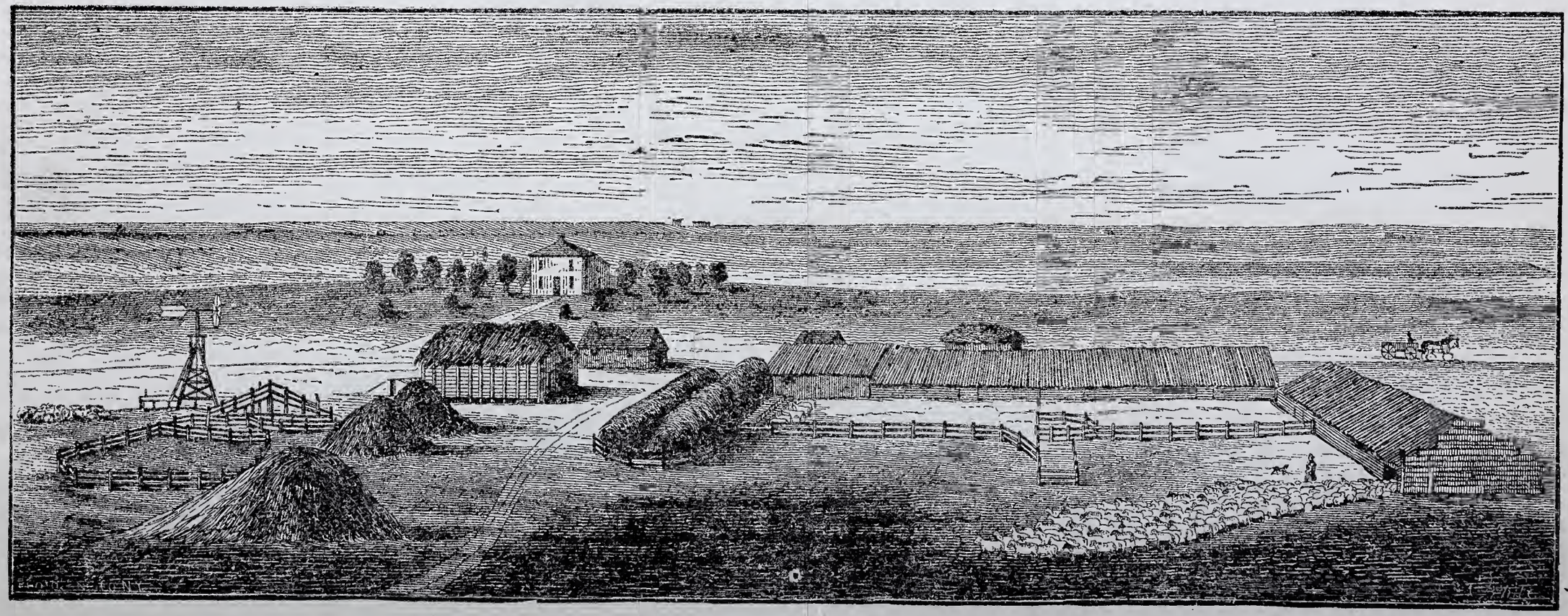
ITS RECEIPTS AND EXPENDITURES.

In presenting the experience of Mr. G. H. Wadsworth in growing sheep in Kansas, the items of expense, sales and profits are given to show practically the results obtained, as well as the consecutive steps taken by him, which may be successfully repeated by others who bring to this interest the necessary capital and business methods. The case of Mr. Wadsworth is by no means exceptional. Many other farmers, especially in western Kansas, where the range is unlimited, some with larger and some with smaller flocks, can show as favorable ledger accounts. It will be noticed that the correspondents from various counties of the State, in answering the question, "What are, in your estimation, the greatest drawbacks to successful sheep husbandry in Kansas?" give as answers, "carelessness," "lack of capital," "want of care," "lack of tame grasses," "absence of proper shelter," etc. None of these, it will be observed, are insurmountable obstacles peculiar to Kansas and not found in other States; while on the other hand, it is shown in the correspondence that this State possesses every necessary requisite for successful sheep farming. The drawbacks mentioned are not climatic, nor are they due to location or soil, but may all be overcome by the same knowledge, care and capital which secure success in every other vocation. The following facts and figures were obtained directly from Mr. Wadsworth, and may be relied on as correct. Efforts were made to obtain illustrations of other sheep farms in the State, but from lack of time and other unavoidable delays, we have not been able to secure them.

In March, 1876, Mr. G. H. Wadsworth took up under the homestead and timber-culture acts 320 acres of Government land, situated eleven miles south of the Arkansas river, in Pawnee county, and the same distance from Larned, the county seat. The first improvement on the land was the building of a stable, consisting of six posts, covered with straw, sided up with rough lumber, with sod wall on the outside. This house, as shown in cut No. 1, was used by the men breaking prairie and opening up the farm, during the summer. In August of the same year, Mr. Wadsworth moved his family to his farm. In October, he brought his flock, 2,085 head in all, and turned on the range. Before winter set in Mr. Wadsworth had built two sheep sheds, each 128 feet long by 29 feet wide, one running east and west, cornering with the other running north and south, forming two sides of a square (as is shown in cut No. 3) pointing to the northwest and open to the southeast. A light portable fence running around the open sides of this square completed the corral. A stable was also built, measuring 14x32 feet, and connecting with the south end of the shed running north and south. At the same time a well was dug, thirty feet deep, and a wind-mill put up, with a capacity for raising water for 10,000 sheep. In 1877, Mr. Wadsworth built his present residence (as shown in cut No. 3), at a cost of about $1,500; and in 1879, a granary large enough to hold 2,500 bushels of wheat, with shed for farming implements and two buggies, 24x32 feet, at a cost of $100. The roof was thatched with broom corn, and fastened with wire. There are no fences on the farm except the portable one around the corral, the herd law being in force in the county. Cut No. 3 represents the home farm as it is at this time, the view being taken from the east, looking west. On the right are the two sheds, 128x29 feet each, which cost, including corral, $525, the lumber used costing $30 per thousand feet. On the south, and connecting with the shed running north and south, is the stable, 14x32 feet, which cost $20. Next south is the sod shanty, the first home, which cost $75. Farther south, and in the foreground, is the granary and tool-shed already mentioned, while in the rising background is the new home. The wind-mill, shown at the left, cost $50;



No. 2.—SHOWING MR. WADSWORTH'S FIRST IMPROVEMENTS.



No. 3.—SHOWING MR. WADSWORTH'S PRESENT RESIDENCE, SHEEP CORRAL, WINDMILL, ETC.

the well underneath, $20. Near the wind-mill is a reservoir made of two-inch plank, 5x16, and three feet deep, supplying four troughs, each sixteen feet long and one foot wide; ample to water 4,000 sheep; cost $35. Near the well are appliances for dipping. (See cut No. 1.) The boiler is eighteen inches deep, thirty inches wide, and eight feet long, with plank sides and galvanized iron bottom, in a clay and partly excavated furnace; the smoke-stack is ten-inch stove-pipe—total cost, $7. The dipping-vat is built of two-inch pine, and is sixteen inches wide, five feet deep, and twelve feet long at the top. The end farthest from the dripping-platform is perpendicular, but the end nearest the platform slopes from the upper edge inward, for six feet, or to the middle of the vat, forming at once the end and the bottom of one-half of it. On this slope are nailed cross-slats, to give the sheep a foothold to walk out. It leads to the dripping-platform, an ascending inclined plane, sixteen feet long by ten feet wide, divided by a fence supporting a cut-gate at the lower end, and at the upper end a gate for each division. The floor is made of matched stuff, with half-inch strips covering the joints. Over these, and cross-ways, are nailed inch strips, to give the sheep a foothold. The half-inch strips make the floor water-tight, make a clear run-way under the cross-slats for the drip, and guide it back to the vat. When one division of the platform is filled with drying sheep, the cut-gate is swung so as to shut them in and open the lower end of the other division. When this is nearly filled, the upper gate of the first division is opened, and the sheep are driven out by way of the descending platform, making room to gather in a fresh lot from the vat while those in the other division are dripping. These steps are repeated until all are dipped, thereby economizing time and fluid.

The portable corral fence is so arranged that the pen from which the sheep are taken to the vat holds only 100 sheep at a time, and connects by a gate with a larger pen capable of holding 1,000. The liquor used for dipping is made of tobacco, 50 lbs., sulphur 2 lbs., and arsenic 1 lb., for each 100 sheep; cost, $2.30. The liquor is prepared the day previous to dipping, when the large reservoir from the well is brought into use. The liquor is boiled and run off into this reservoir. On dipping-day the liquor is run back into the boiler again, heated, and gradually fed into the vat as needed—since it is much more effective when used warm. Cost of vat $10.50, dipping-platform $6, and boiler $7; cost of apparatus complete, $23.50, with which four men can dip 3,000 sheep in one day. The sub-ranch is six miles from the farm—its improvements consisting of shepherds' sod house, $50; well, wind-mill and watering-troughs, $100; with sheds and corral for 2,000 sheep, $400; total, $550.

Mr. Wadsworth furnishes the following statement of receipts and expenditures for the three years he has been engaged in the sheep business on his present farm:

COST OF RANCH.

Shepherds' house	$75 00
Sheds and corral	525 00
Windmill, well and watering-troughs	105 00
Dipping-vats, boiler, etc	23 50
Incidentals	50 00
Total	$778 50

The land on which the ranch is located was homesteaded, and cost the usual Government fees. Operations commenced October 1, 1876, with 1,000 ewes, 1,062 wethers and lambs, and 23 bucks—2,085 head in all.

Receipts and expenses for the year ending October 1, 1877:

EXPENSES.	
Two shepherds	$600 00
Shearing	150 00
Dipping	85 00
Grain	210 00
Hay	200 00
23 sheep, died	57 50
15 sheep, killed by wolves and dogs	37 50
Total	$1,340 00

RECEIPTS.	
Wool sold	$1,950 00
Ewes sold	1,250 00
Wethers and bucks sold	225 50
Total	$3,425 50

For year ending October 1, 1878:

EXPENSES.		RECEIPTS.	
Two shepherds	$600 00	Wool sold	$2,150 00
Grain	175 00	Ewes sold	1,375 00
Hay	140 00	Wethers and bucks sold	762 50
Shearing	150 00		
Dipping	85 00		
14 sheep, died	35 00		
13 sheep, killed by wolves and dogs	32 50		
Total	$1,217 50	Total	$4,287 50

For year ending October 1, 1879:

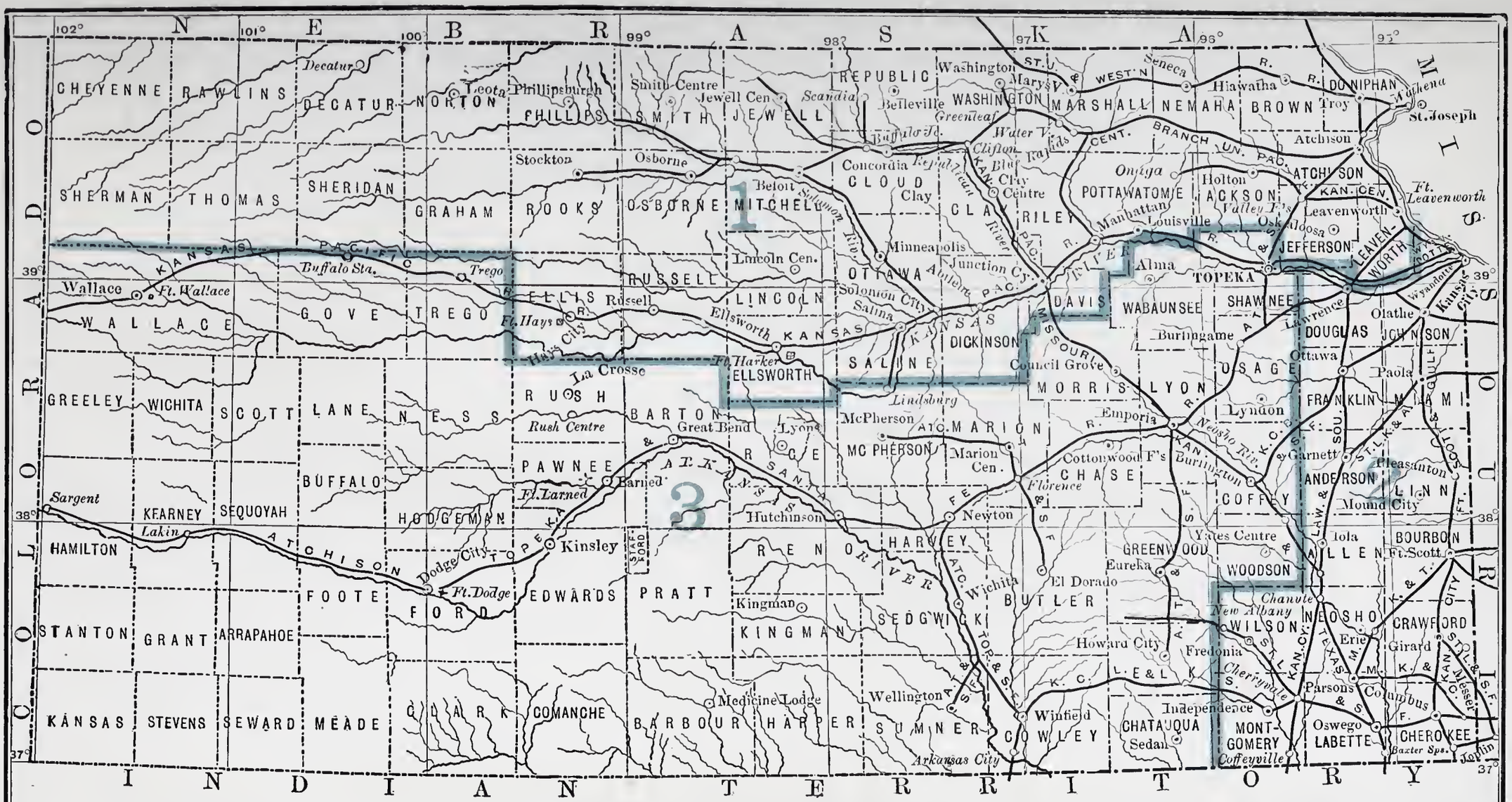
EXPENSES.		RECEIPTS.	
Two shepherds	$600 00	Wool sold	$1,800 00
Grain	120 00	Ewes and wethers	1,750 00
Hay	125 00		
Shearing, dipping, etc	300 00		
16 sheep died	40 00		
Total	$1,185 00	Total	$3,550 00

For these three years the total expenses are $3,742.50, total receipts $11,263, leaving a net cash profit of $7,420.50 on original investment of $4,948.50. The original flock was worth $2 each, or $4,170 in all. From this he has graded up a flock of 2,200, all young and in fine condition, valued at $3 each, or $6,600 in all. This gives an additional profit of $2,430. The entire original stock of ewes and wethers has been disposed of by the ordinary sales, so that only young and well-graded sheep now remain.

Mr. Wadsworth combines general farming with sheep raising. In addition to the 320 acres secured from the Government, he has bought 480 more, at a cost of $1,400.

In 1877, he had 20 acres in wheat, yielding 400 bushels; in 1878, he had 130 acres in wheat, yielding 3,000 bushels; in 1879, he had 275 acres in wheat, yielding 858 bushels. And now has growing 75 acres of wheat and 40 acres of rye. The wheat has pastured the sheep every winter, much to the benefit of both.

The items of hay and grain in the statements of expenses were not bought, but raised on the farm, and the charge against the sheep account is placed to the credit of the former account. Millet, rye and wheat straw, with corn sown thick, cut green and cured, are used as the principal winter feed, about one ton of fodder being required for every 100 sheep.



MAP showing the Railroads of Kansas, January 1, 1880; also the Census Districts, which conform to the boundaries of the Congressional Districts.

RAND, McNALLY & CO., ENG'S, CHICAGO.

ALFRED GRAY,

BORN DECEMBER 5TH, 1830.

DIED JANUARY 23D, 1880.

BIOGRAPHICAL SKETCH OF HON. ALFRED GRAY.

Alfred Gray was born at Evans, Erie county, New York, December 5, 1830, being the third of a family of eight children. His parents, Isaiah and Mary Morgan Gray, were of English descent.

While Alfred was yet a child, his mother became a widow. He remained with her until he was fourteen years of age, working on the paternal farm through the summer, and attending common school during the winter.

At fourteen, he left home to begin life on his own account. Devoting two years' to work, for wages, on a farm, he served three years thereafter as a sailor on Lake Erie, where by merit he rose to the office of first mate.

At the end of these three years his mother died, and dying urged her son to abandon his life upon the lakes, and commence a course of careful mental culture. Yielding with filial devotion to her earnest entreaty, he at once entered Westfield Academy, N.Y. Here and at Girard Academy, Penn., and Erie Academy, N. Y., he gave five years to the attainment of an excellent academic education. It was ever a proud recollection of Mr. Gray, that his mother had guided his youthful energies to a higher and better career.

He graduated at the Albany Law School, in his native State, in 1855, and immediately, at the urgent solicitation of Hon. N. K. Hopkins, of Buffalo, a former preceptor, he accepted an equal copartnership with him, and gave two years of energetic and successful attention to the practice of law in that city.

In the spring of 1857, he immigrated to Wyandotte county, Kansas, and opened a law and real estate office at Quindaro. But, purchasing a farm, he soon abandoned the law, and retired to his land, where, until 1873, he gave his enthusiastic attention to agriculture, horticulture and stock raising. By general consent, his farm was recognized as the handsomest and most successful one in the State.

Mr. Gray was a man whom the people of his adopted county and State were pleased to honor. He was repeatedly called to fill public positions of eminent responsibility and trust. In 1858, he was one of the County Commissioners of Leavenworth county. He was Chief Clerk of the last Territorial House of Representatives, a member of the first House of Representatives of the State, and in 1874 a member of the Kansas Central Relief Committee.

From April, 1862, to March, 1864, Mr. Gray served with unusual ability as Regimental, Brigade and Division Quartermaster in the Union army, when on account of ill-health he was compelled to resign.

In 1866, he was made a Director of the State Agricultural Society, and until it was merged into the State Board of Agriculture, in 1872, he was continued in the same relation, proving a most efficient and influential officer—peculiarly fitted, both by study and practical skill, for any position in the gift of the Society. He was General Superintendent of the State Fair held at Lawrence in 1870, as well as of the fair at Fort Scott. At the organization of the State Board of Agriculture, in 1872, he was elected its first Secretary, when he sold his farm and removed to Topeka. This position he filled with unequaled efficiency, and surpassing success, till death closed his earthly career.

He early discerned the difficulties and unremunerative expense attending the management of great agricultural fairs in a new and sparsely-settled State, and his fertile mind promptly conceived the plan of substituting in their stead the publication and wide distribution of quarterly, annual or biennial reports, containing carefully collected, accurately compiled, and thoroughly classified statistics of the various industries and institutions of Kansas. Not only the State and national verdict, but the verdict of foreign States as well, heartily concedes the far-seeing wisdom and unexampled success of his scheme.

Whilst giving unremitting care to the accumulating work incident to the preparation of his reports, Mr. Gray rendered invaluable service as Secretary of the State Board of Managers of the Kansas exhibit at the Centennial in Philadelphia in 1876. From the commencement of the State building until after the close of the Exposition, and until all of the State products there were disposed of or on the cars for shipment home, he was incessant in his labors. It is pertinent just here to remark that no State exhibit at the Centennial attracted more interested attention or secured a wider notoriety than the one in the Kansas-Colorado building. Not the least thoughtful service of Mr. Gray here was the valuable exchanges effected by him with foreign nations, securing thereby rare specimens of their products, which are now on exhibition at the museum of the State Board of Agriculture, at the State House in Topeka. In the entire list of appointments by the President to represent the Government of the United States at the Paris Exposition of 1878, no name is more illustrious or worthy than that of Alfred Gray; but he declined the position because of ill-health, and his responsible duties at home.

Besides the valuable aid Mr. Gray has given to the agricultural interests of Kansas in other ways, he was for two years a Regent of the State Agricultural College, at Manhattan, during its early struggles for an existence as a practical school for this great interest, and was largely influential in shaping its present useful course.

May 1, 1855, Mr. Gray was married to Miss Sarah C. Bryce, at York, Livingston county, N. Y., and leaves, besides this wife, two children, a son and daughter, Minnie and Alfred James.

Mr. Gray was essentially a domestic man in his tastes and habits, always spending much of his time at home in the companionship of his family. Wherever he lived, in the city or country, his home surroundings always evidenced skill and an eye for the beautiful in the selection and cultivation of trees and shrubbery; and this, together with his wife's love of flowers, made their home a noticeably attractive spot. Mrs. Gray's domestic virtues are beyond praise. During the long years of Mr. Gray's invalidism, she was wholly devoted to him. In the last year they made several journeys together, hoping that a change of climate and scene might prove beneficial, but each time Mr. Gray was less and less inclined to sever himself from the comforts and quiet of home. The last several months of his life were spent almost exclusively with his own family, and when the final summons came he was sitting up in his chair, dressed and ready for work, attended only by his wife and daughter.

Of his energy and industry, and his other admirable traits of character, the address delivered at his funeral services most appropriately speaks.

ADDRESS DELIVERED BY REV. F. S. McCABE, D.D., AT THE FUNERAL OF HON. ALFRED GRAY, ON SUNDAY, JANUARY 25, 1880.

It is a significant fact, that the death of Alfred Gray has brought the same word to the tongues of us all; and that word is—*loss*. Not only in this city, but equally throughout the length and breadth of the State, there is one feeling and utterance on this subject. There is no person so unfamiliar with the work of the deceased—no person so slightly

identified with our interests and prospects—that he does not join in the spontaneous and universal expression: We have sustained an irreparable loss.

As for myself, I have at least this qualification for speaking here to-day—that I have known the deceased for many years, that we were friends, and that I sympathized with his special labors, and encouraged him in the prosecution of them, long before they had become successful and popular.

Though these services must of necessity be simple and brief, yet it would seem unpardonable if some direct reference were not made to those qualities which rendered the life of Mr. Gray valuable to the State of Kansas, and to the entire country, and which made his death a loss to the State and the Nation.

Nothing can now be given beyond a mere outline of these qualities, without elaboration.

1. *Love of order and system.* This quality, useful everywhere, was invaluable in his department of service. It enabled him to devise and use successfully the blank forms in which statistics were gathered by the officers of the counties and townships, and to compile returns so as to make them easily intelligible.

2. *Exactness.* Of course, incorrect statistics are misleading, and therefore are worse than none. In his work, especially in the beginning, Mr. Gray had to deal with many officials who were careless and inaccurate. With ceaseless pains-taking, and inexhaustible patience, he corrected errors and sought to supply deficiencies. He recognized no standard but that of perfect correctness.

3. *Industry.* He withheld himself from no labor that his duty required. His ideas of work were exacting; they knew nothing of mere office hours, nor of mere perfunctory performance of routine duties. The rigid application of these ideas, through a series of years, would have tried the strongest constitution—they greatly over-taxed his physical powers. He often expressed the determination to work as long as he lived. When too feeble to remain at his office, he withdrew to his residence. He dictated, and corrected, sitting in his chair—lying on his bed. He refused audience to no one—receiving with courtesy the stranger and immigrant, and furnishing information even on matters wholly outside of his peculiar department. In fact, he worked the day before his death.

4. *Aptitude.* If it be one of the marks of genius that it unerringly finds the line in which its powers should work—as Herschel became an astronomer, and Stephenson an engineer, and Agassiz a naturalist, then we may claim for our friend the application of this rule. Had he continued in the legal profession, with which he was at first connected, probably he would have held a respectable position, but he would have been surpassed by many of his brothers at the bar. Turning to the department for which he had extraordinary natural endowments, he became in some particulars the foremost statistician of this country. In comprehensive scope and plan, in fullness of details, in exhaustive thoroughness, his reports are unequaled by any on similar topics that this country has produced.

5. *Ambition.* I am not afraid to use this word in connection with Alfred Gray. He was ambitious; but his ambition had in it no taint of coarse selfishness. Like all men of power, he believed in himself. He knew that there was something that he could do better than anybody else could do it, or would be likely to do it. The work that he proposed to himself was this—collecting statistics as to the resources and productions of the State, illustrating the growth of the State in population and wealth, representing its agricultural, industrial, mercantile and other interests, its educational and religious institutions, and exhibiting all these in diagrams and comparative tables. It was his ambition to do this great work in the best manner. I pronounce that a high and worthy ambition.

6. *Honesty.* No one who knew Mr. Gray could be persuaded that he ever printed a

figure that he did not believe to be correct. The chief element of value in Gray's Reports is the conscientiousness of their author. At home and abroad he justly had the reputation of a man of truth and honor—a man who was not in the market—who could not be induced to make a statement for a consideration. This explains the fact that the reports have been eagerly sought and carefully read in this country, and in Great Britain and on the continent.

7. *Courage.* I am aware that, in the popular estimate, courage is that quality which leads to deeds of daring and exposure—which animates the soldier as he coolly meets a volley of musketry, or as with fiery impetuosity he charges a redoubt. But I submit that the courage which kept Alfred Gray at his work year after year, under so great physical disadvantages, was of as fine quality as that which holds a soldier at his post at the risk of his life. To work straight on—to make no complaint, nor parade of invalidism—to carry cheerfully the great weight that most other men would count sufficient excuse for inaction—that requires courage of a high order. Our friend often expressed the desire that he might die with the harness on. His wish was gratified. He expired sitting in his chair, and dressed as for the transaction of business.

These characteristics, and such as these, gave Mr. Gray a prominent place in our State history; they enabled him to live a useful life; and they justify us in mourning his death, while he was yet in his prime, as a public loss.

I dare not speak of the grief of those who to-day lament the death of a devoted husband, a tender father, and an affectionate brother. May the presence of our blessed Lord sustain and comfort them. May this household find consolation in the reflection that they were permitted to minister faithfully to the wants of him who is gone, and that the last sounds that fell on his ears were the loving tones of his wife and children.

Those who were with him in his office, some of whom had been associated with him for years, had learned to regard him, not as an employer, but rather as a kind and faithful friend. Their grief is sincere and painful at the departure of one whom they had known so long, and esteemed so highly.

The death of Mr. Gray is deeply felt by the present and former members of the State Board of Agriculture, and by the officers of State.

Gentlemen, the formal action taken by you—your presence here—these tokens of mourning—all these indicate the genuine esteem in which you hold the deceased, and they express your profound grief on account of his death.

As we stand together by the side of the dead body of your colleague this quiet Sunday afternoon, permit me to direct your minds to the day when you also shall lay aside forever the cares and toils and responsibilities of this earthly life. When that inevitable day shall come to each one of you, it will be a comfort if your career has been marked by official fidelity.

And I beg you to remember that official fidelity has no sure guarantee but personal integrity. I also entreat you to believe that personal integrity has no sound support, no sufficient authority, no competent instruction, but that which is furnished by this Book containing God's gracious revelation of Himself to us.

Over the body of our friend we place stalks of wheat, and beautiful and fragrant flowers, and we moisten them with our tears. Our friend loved flowers, and grains, and fruits. The best portion of his life was devoted to the study of grains and fruits, and the increase of the products of the earth. If it be true that the man is a benefactor of his race who causes two blades of grass to grow where only one grew before, then Alfred Gray deserves high rank among those who have wrought well for their country and mankind. He loved the soil of Kansas, and henceforth that soil shall be more precious to us because it contains his dust.

His epitaph need not be written in words; it is engraven ineffaceably on our hearts.

In St. Paul's cathedral, over the remains of Christopher Wren, the architect of the cathedral, are the words: "Do you seek a monument? Look around you!" In the spirit of that inscription, we say: Do you seek the monument of Alfred Gray? Look around you! Behold his monument in the history of the State that he served so well—in her good name that he promoted, at home and abroad—in her wealth that he immensely enlarged. Behold his enduring monument in the prosperity of the commonwealth of Kansas, into whose territory he brought thousands of industrious, strong-armed, and hopeful immigrants—of many nations and creeds, but representing one common human brotherhood—who, as they gather in the busy cities, or scatter over the fertile prairies—as they work in the shops, or plow the fields, or gather the ripened grains, or the golden fruits of the orchards, and the purple clusters of the vineyards—shall gratefully hand down to the succeeding generations the memory of the good work and the honorable name of Alfred Gray.

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For the Quarter Ending December 31, 1879.

ALLEN COUNTY.

Robert Cook.....Iola.
D. D. Spicer.....Iola.
Chas. P. Ives.....Humboldt.
S. J. Stewart.....Humboldt.

ANDERSON.

R. M. Slonaker.....Garnett.
J. E. White.....Garnett.
John Moler.....Mineral Point.

ATCHISON.

R. A. Van Winkle.....Arington.
A. Keithline.....Atchison.
Samuel Stoner.....Lancaster.
Joshua Wheeler.....Nortonville.

BARBOUR.

Geo. E. Wise.....Medicine Lodge.
C. H. Douglas.....Sun City.

BARTON.

H. S. Willms.....Ellinwood.
M. W. Halsey.....Ellinwood.
B. B. Smyth.....Great Bend.

BOURBON.

J. Brenner.....Hepler.
Geo. P. Eves.....Uniontown.
S. B. DeLano.....Fulton.

BROWN.

C. H. Isely.....Sabetha.

BUTLER.

J. D. Connor.....Eldorado.
E. R. Powell.....Augusta.
H. W. Beck.....Indianola.

CHAUTAUQUA.

M. Bumgarner.....Cedarvale.
D. J. Moore.....Sedan.
A. Ellis.....Elk City.

CHASE.

J. W. Byram.....Cedar Point.
S. M. Wood.....Elmdale.
E. W. Lee.....Toledo.

CHEROKEE.

H. R. Crowell.....Baxter Springs.
H. C. Pursel.....Columbus.

CLAY.

Mary S. L. Burt.....Wakefield.

CLOUD.

Geo. W. Macy.....Macyville.
David Turner.....Clyde.
J. E. Short.....Concordia.

COFFEY.

S. J. Carter.....Burlington.
Orson Kent.....Burlington.
C. H. Graham.....Leroy.

COWLEY.

Thomas Jefferson.....Lazette.
C. A. Bliss.....Winfield.
J. P. Short.....Winfield.
E. E. Bacon.....Winfield.

CRAWFORD.

S. C. Millington.....Mount Carmel.
John Baily.....Girard.
W. W. Armsworthy.....Arcadia.

DAVIS.

A. P. Trott.....Junction City.

DICKINSON.

C. B. Hoffman.....Enterprise.
O. A. Root.....Newbern.
John W. Robson.....Cheever.
J. B. Edwards.....Abilene.
H. C. Junken.....Abilene.

DONIPHAN.

J. R. Pierce.....White Cloud.
T. W. Heatley.....Troy.

DOUGLAS.

Wm. Roe.....Vinland.

EDWARDS.

C. H. Kirkpatrick.....Nettleton.
J. A. Walker.....Kinsley.

ELK.

J. F. Ramey.....Howard.
J. P. Way.....Longton.
Chas. S. King.....Elk Falls.
J. F. Chapman.....Moline.

ELLIS.

B. N. Turk.....Turkville.
P. W. Smith.....Hays City.

ELLSWORTH.

W. S. Gile.....Venango.
D. B. Long.....Ellsworth.
A. A. Jellison.....Wilson.

FORD.

R. B. Fry.....Spearville.
J. W. Sidlow.....Offerle.

FRANKLIN.

W. H. Clark.....Ottawa.

GREENWOOD.

A. N. Godfrey.....Madison.
S. Martindale.....Madison.
W. McBrown.....Charleston.

HARPER.

W. M. Glenn.....Harper.

HARVEY.

W. H. Prouty.....Newton.
Geo. S. Funk.....Newton.
T. S. Floyd.....Sedgwick.

JACKSON.

Frank M. Wilson.....Holton.

JEFFERSON.

L. H. Gest.....Valley Falls.
M. M. Maxwell.....Valley Falls.
Edwin Snyder.....Oskaloosa.
Val. Brown.....Thompsonville.

JEWELL.

J. S. Foster.....Jewell.
Geo. S. Bishop.....Jewell Center.

JOHNSON.

G. M. Waugh.....Gardner.
V. R. Ellis.....Gardner.

KINGMAN.

James P. Mead.....Kingman.
J. C. Martin.....Kingman.

LABETTE.

R. W. Gandy.....Mound Valley.
J. B Cook.....Chetopa.
C. A. Wilkin.....Oswego.
John F. Hill.....Oswego.

LEAVENWORTH.

C. H. Cushing.....Leavenworth.
E. J. Holman.....Leavenworth.
J. H. Blythe.....Tonganoxie.

LINCOLN.

J. P. Harman.....Vesper.
C. C. Page.....Rock Hill.

LINN.

H. M. Greene.....LaCygne.
O. D. Harmon.....LaCygne.
L. Hibbs.....Mound City.

LYON.

W. R. Griffith.....Emporia.
John W. Loy.....Americus.

MARION.

James H. C. Brewer .....Peabody.
Chas. E. Whitney .....Cresswell.
D. W. Crane.....Durham Park.

MARSHALL.

Sidney Walter.....Marysville.
L. L. Jewell .....Irving.
W. T. Dwinnell.....Frankfort.

M'PHERSON.

John F. Hughes.....McPherson.
W. L. Fouts.....McPherson.
A. S. Eastlick.....Lake View.

MIAMI.

H. M. McLachlin.....Paola.
Johnson Clark.....Lane.

MITCHELL.

H. C. Babcock .....Naomi.
S. B. Floyd.....Blue Hill.
C. P. Stevens.....Beloit.

MONTGOMERY.

L. A. Walker.....Independence.
A. A. Stewart.....Independence.
D. W. Kingsley.....Independence.

MORRIS.

L. McKinzie.....Parkerville.
E. Carter.....Parkerville.
J. J. Thomas.....Parkerville.
J. L. Shore.....Camden.

NEMAHA.

D. R. Magill.....Capioma.
Geo. Hay.....Seneca.
D. R. Bradt.....Centralia.

NEOSHO.

J. W. Blaine .....Osage Mission.
M. T. Jones.....Chanute.

NORTON.

A. F. Harmer.....Norton.

OSAGE.

John Richey.....Fairfax.
Sol. Bower .....Olivet.
Max. Buek.....Burlingame.
D. H. Danhauer .....Lyndon.

OSBORNE.

D. W. C. O'Neil.....Osborne.
M. Mohler.....Osborne.
Frank Stafford.....Bloomington.
H. S. Willson.....Bull City.

OTTAWA.

Geo. M. King.....Minneapolis.

PAWNEE.

W. H. Gill.....Larned.
S. S. Dickinson.....Larned.
V. Dirlam .....Garfield.
F. F. Downs .....Ray.

PHILLIPS.

George O. Blake.....Kirwin.
Frank Strain.....Phillipsburg.
Enoch W. Poor.....Myrtle.

POTTAWATOMIE.

E. Walker.....St. George.
R. W. Jenkins.....Onaga.
Edward Nason.....Springside.
W. R. Benton.....Maple Grove.
D. S. Abbott.....Wamego.

PRATT.

William L. Potter.....Carmi.

RENO.

B. P. Hanan .....Langdon.
A. L. Kellogg.....Hutchinson.
G. V. Ricksecker .....Hutchinson.
L. J. Templin.....Hutchinson.

REPUBLIC.

V. Van Trump.....Belleville.
D. Doran.....Fenwick.

RILEY.

George T. Polson.....Randolph.
H. P. Dow .....Manhattan.

ROOKS.

E. Bartholomew.....Rockport.

RUSSELL.

W. H. Biays.....Bunker Hill.
Thos. W. Hey.....Wilson.

SALINE.

Cicero Post.....Salina.
James Smith.....Assaria.

SEDGWICK.

John Kelly.....Blendon.
J. Berger.....Richland.
W. P. Stem.....Wichita.

SHAWNEE.

John McDonald.....Topeka.
T. L. Stringham.....Topeka.
W. Ayres.....Silver Lake.

SMITH.

W. J. Zimmerman .....Corvallis.

SUMNER.

T. A. Hubbard.....Rome.
H. C. St. Clair.....Belle Plaine.
Thos. Nixon .....Argyle.
George T. Walton .....Oxford.

WABAUNSEE.

J. M. Johnson .....Harveyville.
H. A. Stiles.....Pavilion.
W. Scofield.....Alma.

WASHINGTON.

E. J. Nason.....Washington.
Charles Williamson.....Washington.
J. R. Tripp.....Barnes.

WILSON.

P. W. Bahl.....Fredonia.
Isaac Mitchell, jr.....Fredonia.
Henry Pearmain.....Buffalo.

WOODSON.

W. W. Smith.....Neosho Falls.
C. H. Nichols.....Neosho Falls.

WYANDOTTE.

C. H. Carpenter.....Wyandotte.
W. W. Dickinson.....Wyandotte.

BUFFALO.

G. M. D. Goff.....Mason.

DECATUR.

Daniel Boughman.....Shibboleth.

MEADE.

A. Bennett.....Pearlette.

RAWLINS.

J. M. Matheny.....Attwood.

STAFFORD.

C. M. Johnson.....Stafford.